

Opower Home Energy Reports

February 28, 2012

Webinar Transcript





Landmark Designation

The program described in this case study was designated in 2011.

Designation as a Landmark (best practice) case study through our peer selection process recognizes programs and social marketing approaches considered to be among the most successful in the world. They are nominated both by our peer-selection panels and by Tools of Change staff, and are then scored by the selection panels based on impact, innovation, replicability and adaptability.

The panel that designated this program consisted of:

- Melissa Klein, US EPA's ENERGY STAR® Program
- Arien Korteland, BC Hydro
- Clifford Maynes, Green Communities Canada
- Doug McKenzie-Mohr, McKenzie-Mohr Associates
- Devin Causley, Federation of Canadian Municipalities
- Edward Vine of Lawrence Berkeley National Laboratories
- Dan York, ACEEE

This transcript covers a webinar held on Tuesday, February 28, 2012. Additional materials about this program can be found at: <http://www.toolsofchange.com/en/case-studies/detail/647>.

Introduction by Jay Kassirer

This season, Tools of Change has dozens of social marketing webinars for you. There are case studies, like the one today, not only in home building energy as this one is, but also in sustainable transportation, composting and water efficiency. We also have social marketing instruction and review webinars. For those of you with a home/building energy interest, I'd like to remind you that on our Tools of Change website (www.toolsofchange.com) there is an Energy Topic Resources page that includes latest news, as well as a list of the most recently posted energy-efficiency case studies and resources.

Today's webinar covering Minnesota's **Opower Home Energy Report** is the second of three *Landmark* case studies that were selected this year dealing with energy efficiency. The *Landmark* designation recognizes programs and social marketing approaches considered to be among the most successful worldwide. They're selected by a peer selection panel based on impact, innovation, replicability, and adaptability, and you'll note that we have included panel members, both from on-the-ground programs like Arien Korteland of BC Hydro, Clifford Maynes of Green Communities Canada, and Stephanie Thorson who was with Summer Hill at that point, as well as some of North America's most proactive NGO and government organizations supporting energy conservation professionals including Devin Causley of the Federation of Canadian Municipalities, Melissa Klein of the U.S. EPA's ENERGY STAR® Program, Edward Vine of Lawrence Berkeley National Laboratories, Dan York of ACEEE, and Doug McKenzie-Mohr of McKenzie-Mohr Associates.

The panel said that the main strength of this case study was the ongoing individualized feedback paired with norm appeals. [Slide] You can see some quotes here from the panel members. Typically, feedback is one of the more poorly used tools by programs, but in terms of energy efficiency, we're becoming much better at how we provide individual feedback, particularly through home monitors and reports. Opower has been at the forefront of some of that work.

The panel also found that, in terms of strengths, there are good results and they're well measured. The program provides a low-cost way to reach out to a large number of utility customers and influence their behavior. The panel also wanted to know more about the long-term impacts, e.g., will all this wear out as newness fades, and also about the environmental impact of printing and mailing so many full color reports. You'll find out more about those areas in today's webinar.

In terms of the Tools of Change that we talk about, the ones that you will see well illustrated in today's case study will be *building motivation over time*, the use of *challenges* to make the energy-efficiency program more fun and engaging, the use of *feedback*, some *financial incentives*, both descriptive and injunctive *norm appeals*, as well as *vivid, credible, personalized, empowering communication*.

We have three presenters today:

1) Todd Berreman is responsible overall for delivering all Center Point Energy Conservation Improvement programs; Center Point Energy Conservation is a client of Opower. He has on-the-ground experience implementing this program and is responsible for meeting all the savings goals consistent with state guidelines for Center Point Energy as well. He has been with Center Point for 12 years. He holds a BA in Management and an MBA in Organizational Leadership, both from Botel University.

2) From Opower itself, Josh Bufford is the Director of Client Solutions. As one of the earliest members of the Opower team, Josh has worked with Center Point Energy and many other utilities in deploying Opower's energy efficiencies to mark grid, marketing, and social media platforms. Prior to Opower, Josh spent eight years at Capital One Bank, leading product initiatives and teams in loyalty marketing, Affinity Banking Partnerships, and direct marketing fulfillment and sourcing. Josh holds a BF from the College and William and Mary.

3) Sucheta Lakhani is the Engagement Manager at Opower. She joined in July 2010 and is responsible for the success of its home energy reporting platform enabled program. Prior to Opower, she spent six and a half years at Booz Allen Hamilton as a Management Consultant for energy related projects. Before that, she worked as an analyst at PA Consulting, developing strategies for global utilities and U.S. ISOs. She received her Bachelor's degree in economics and politics from Brandeis University and her Masters in science degree in regulatory economics with honors at the London School of Economics.

Josh Bufford, Director of Client Solutions, Opower

We are going to share the duties in talking with you a bit about the Opower program and will welcome your questions at the end.

Opower is a software and customer engagement company. We have been in business for about five years and work with a number of utilities to engage their customers and in cost effectively delivering large-scale energy efficiency programs.

Some stats about our company are there to the right. [Slide] 230 employees. We have committed over \$20 million in research and development, backed by leading investors with offices in a few locations. It's important to note that our core competencies lie in the behavioural sciences, which allows us to best communicate with customers in a way that is motivating. Direct marketing expertise allows us to deliver messages in a cost-effective and efficient manner. We also do software design. We make it scalable for millions of customers.

Some touch points on the industry results: 2%-4% energy savings for consumers nationwide and now internationally; 85% of customers, when surveyed, have a direct recall of these materials and are using and sharing them; greater than 60% are sharing them with their friends and relatives when we send this information; to date, we have 690 gigawatt hours of savings. We will soon cross the 1 terawatt hour of energy savings line.

[Slide] Take a quick look at the number of partners that Opower has been blessed to work with. I'm sure you'll recognize some familiar utility logos there. We have done a lot of work in the State of Minnesota and I've spent a lot of time on the road across that state working with this list of utilities: Minnesota Energy Resources Corporation, Big Country Power, Latana, Austin, Rochester, all Minnesota utilities, Municipal Utility, Otter Tell Power, Excel Energy, Center Point Energy, and Conexus Energy.

The results in Minnesota have been tremendous. We have found a great working relationship with utilities and regulators, stakeholders alike, in that market.

Todd Berreman, Center Point Energy Conservation Improvement Programs

I'll provide an overview of Center Point Energy. We are the third largest publicly traded natural gas delivery company in the United States. We have natural gas service in Minnesota, Oklahoma, Arkansas, Louisiana, Mississippi, and we're also a combination gas and electric utility in Texas. Our corporate office is located in Houston, Texas, and I have an office in Minneapolis.

We have 3.2 million natural gas customers across all of our regions; we're the nation's third largest electricity and natural gas delivery company. We started our partnership with Opower back in 2009 and launched our programs in 2010. We currently have 125,000 natural gas customers receiving the reports in Minnesota. We did do some of a staged rollout with 75,000 customers in 2010 and then added 25,000 customers incrementally to those in 2011 and 2012. We were one of the early adopters of Opower in our marketplace and were one of the very first to launch the reports on a large scale.

We recently added customers in the Arkansas region, which recently launched energy-efficiency programs with 50,000 natural gas customers last fall, and also in Oklahoma, which also has a new energy-efficiency program. Oklahoma launched 30,000 reports into the market back in 2011 as well.

Sucheta Lakhani, Engagement Manager, Opower

Now that you have some background and a little understanding of who we are and how we've been working with Center Point, I'm going to dive into our product and what it is that we actually do that helps drive those behavior changes. We've had great success in the state of Minnesota, as Josh discussed earlier, and there are a few reasons and a few mechanisms that have been the catalyst for that success. I'll speak about three of them briefly.

I'll start with what we refer to as our "bread and butter," which are the home energy reports. [Slide] You can see a screenshot here. This is an actual home energy report that's sent out to our Minnesota and Center Point customers. These customers are randomly selected to receive these reports from a group of an eligible base. The reports provide personalized information for each individual customer. We receive millions of

pieces of data from all the utilities we work with and we're able to take that data and do something very personal for each customer.

Specifically, we're able to provide that normative comparison that Jay alluded to earlier, which allows customers to contextualize and understand their usage. Often times, people know that they use energy but they don't know if it's a little or a lot. Providing that normative comparison with people who are their neighbors or are in similar homes, allows people to get a better sense of what they're doing and how they can try to save energy. We focus on that normative messaging in the front part of the report. On the back of our reports we provide tips or actions that customers can take to save energy. It's been a real focus of our product since the beginning.

One of the newer things we've done recently is the launch of the Opower Marketplace where we take it to the next level. We provide customers with this information on what they can do to change their behavior, what actions they can take in order to save energy. We also often provide coupons that they can use in stores to actually put those behaviours into action.

Center Point Energy has been a real pioneer with us here at Opower in doing that. The first customer we had that went ahead and put on this fourth panel or coupon was Tide's Coldwater (laundry detergent). This takes us to next step, which is above and beyond just thinking about the actions. It's a quick way to go ahead and actually complete that action. That's been quite successful in Minnesota and we're rolling it out throughout the nation and abroad.

The second part of our product is our online web portal, which Center Point also has. It's the next step for the deeper dive that customers can take once they've gotten this report and have gotten hooked into understanding and trying to find out more about their energy efficiency. It provides significant amount of information, a broad breadth of tips and advice on what people can do to save. It helps customers create a plan on how they can save energy and makes sure that they're continuing to follow that plan. It provides some varying looks of their usage to get a better sense of how they're actually using their energy. Whereas the reports are sent out at an agreed-upon frequency, the portal can be accessed at any time, anywhere you are through the World Wide Web.

One of our newer channels that we've had great success with is e-mail. What we have found is that the home energy reports coupled with e-mails really drives energy savings because it continues that engagement with customers and continues that messaging on months where they may not get a home energy report directly in their mailboxes. This gives customers another way to remember, and reminds them about their energy usage so that they can continue to think about it and make those behavioural changes.

Once we've implemented our entire program, the next question that comes up often is how we actually measure our results. Opower is really dedicated to a clearly defined measurement and verification approach. We recognized early on the importance of measurable, verifiable energy savings and we approached our experimental design using

best practices from the pharmaceutical industry. We actually have a very simple scientific method for experimental design. It's the same design as I mentioned that you use in medical trials.

[Slide] What we basically do is create a group of all eligible customers, target those households, and then randomly allocate them to a control group or a task group, which are basically statistically equivalent. The task group receives reports and the control group does not. This is the only difference between the two groups. Both are subjected to the same weather, the same political environment, etc. Over time, we measure the difference in energy use between the customers who get reports and the ones who do not. Although every single house is unique, when aggregated together in groups of tens of thousands, those individualities bleed together and we can measure the savings with a very tight statistical relevance.

We've been accepted as a approach to measuring behavioural efficiency at a variety of different state level public utility commissions who are endorsed by ACEEE, the American Council for Energy Efficient Economy, and we're using a growing number of public utilities commission (PUC) filings including from California, Massachusetts and Pennsylvania. Based on that approach, I thought we'd share a little bit about how savings look in Minnesota for Center Point Minnesota. As you can see, we've crossed the 1.6 million therm mark over the past two years working with Center Point Minnesota.

There are peaks and valleys in savings and that's because of the fact that Center Point Minnesota is a gas utility and gas savings naturally occur during the winter as that's when primary gas usage takes place. [Slide] You can see that as the number of households has grown and as the program has grown in maturity, we've seen huge increases in the savings across the Center Point program. From an electric perspective, Minnesota electric savings have been quite steady and quite substantial per household. We're seeing savings between 2% and almost up to 4% per client, and you can see across the board that those savings have remained high and remained consistent.

Savings [slide] wiggle over the course of the year based on when reports land in homes and seasonality of electricity usage. As you can see, results remain consistent across the board for all of our utilities in the market. The final slide I'll share with you on results is the results across all of our geographies, not just Minnesota itself. [Slide] You can see why we refer to this as the "spaghetti" graph; you'll see that results are consistent. We fall between the 1.5% and 3.5% savings across the board regardless of where you're located, Minnesota or not.

It's been a tremendous success for us as an organization and as a program to see these behavioural changes in every region regardless of season, climate or politics. We've been very consistent in the results that we've been able to deliver.

Josh Bufford: I want to chat for a few minutes about some ways that the behavioural energy savings are expanding; the way that Opower originally imagined behavioural energy savings, the concept of presenting a better bill or better information on which

consumers can take action. Then there are some other ways that we think can increase the impact and cost effectiveness that we can achieve. Using your voting buttons, give us a green thumbs up for everyone who is currently using a programmable thermostat.

[Webinar participants responded]

A couple years ago the ENERGY STAR® label was stripped from programmable thermostats, not because the hardware didn't work correctly. I'm sure many of you know that, when you set them up, they can very clearly save a lot of energy especially during the set-back period. The problem was that they were difficult to program and even our close friends and partners at Honeywell agree that the amount of strong user interface that you can build into its all monochromed screens has been difficult.

The manifestation of this problem led Opower to enter a joint venture with Honeywell thermostats to re-imagine the user interface behind the thermostat. One of the things that got us excited about this opportunity is the fact that, across the United States, 50% or more of energy is passing through the thermostat and the HVAC system. In our quest to have a greater impact on energy efficiency, we know that we have to address the HVAC system through the thermostat in a bigger way.

We also see that 81% of consumers leave the HVAC on while they're away, and that's both in the cooling period and the heating period. Fifty-three percent of consumers never actually set a program on their programmable thermostat. I won't ask for anyone to admit that they happen to be in that group. Ultimately, most consumers override their setting, part of the reason being that there is no real-time feedback. The way that we're deploying this technology with Center Point, and with other utilities, is to create a new user interface that allows consumers to have a pre-set efficient program, and then to provide feedback and control through both the web interface, through the thermostat device in the wall itself, and through smart phones.

We're anticipating energy efficiency savings on the order of 20% on cooling, 15% on heating, and 15% on fan load. Additional flexible demand response programs will allow utilities to drive passive and active demand response by calling events in a segmented fashion. Another way that Opower is innovating around the way that energy efficiency is delivered to consumers is through Opower Marketplace, which is related to the Tide Cold Water coupon that you saw in the example of the home energy report that Sucheta shared.

[Slide] This example is one of the inflation rebates that combines a utility rebate with a retailer rebate, in this case Home Depot, to drive greater savings for the end consumer. You'll note that the coupon has a custom barcode on it that allows Opower and our utility client to track exactly who's adopting these measures, from what store they're being purchased and when so that we can provide instant rebates and instant tracking for better reporting of energy-efficiency measures.

Todd [Todd Berreman, Center Point], we recently promoted your home energy audit program. Can you tell us a little bit about your call volume and things that you saw in the days or weeks after that promotion?

Todd Berreman: We're located in a cold weather climate, so in September/October our heating system begins and, corporately, we have to get ready for winter messages. Using the home energy report to feed back onto what our message is going out to the marketplace was great, and we promoted home energy audits. We have a \$100 home energy audit that includes a blower door test and then infrared thermal imaging of the home. Before we sent that message out on the reports we were normally getting about 20 to 25 requests a day. After, it went up to 50 or 60 requests per day for the time that the reports were in market. It also drove activity to our other energy-efficiency programs simply by either adding it as part of the tips, or boxed separate module on the report itself.

Josh Bufford: Let me leave you with a couple of statistics. Through an observation and a study on energy efficiency filing nationwide, we observed that 25% or more of energy efficiency dollars are spent on marketing and administration. We recently observed with a couple of our clients that as few as 12% of consumers are aware of an energy-efficiency program that their utility provides, and only 5% are participating at all. All of the effort, money and resources are going toward driving energy-efficiency and promoting programs but in some cases only 12% of consumers are being reached.

We also have observed, through some research that we were able to leverage with JD Power, that JD Power scores are three times as high among consumers that are aware and who occasionally participate in an energy-efficiency program than their counterparts who are unaware. The message here is that through the motivational messaging that we're driving through home energy reports from the electronic delivery method that we're using, we're hoping to more efficiently deliver and present energy-efficiency opportunities to consumers and drive up these adoptions, drive down administrative costs as a percentage, and increase the overall customer satisfaction. That's something that Center Point and our other partners are working with us on.

One other area of focus for Opower is in increasing the number of touch points that utilities get with their consumers. When we send out e-mails we're looking for more places where consumers might want to interact with their utility or with their friends and neighbors about energy.

Who has checked a social network in the last week? E.g., Linked In, Google Clutch, Twitter and Facebook.

[Webinar participants responded]

I use most of those on a weekly basis. The idea behind Opower's social engagement is that consumers not only like a normative comparison to homes that are similar to theirs, they also, in some cases, want to compare themselves against friends and family

members in other parts of the country. One of the ways to do that is to bring energy-efficiency information into the social media realm. Opower has partnered with the Natural Resources Defense Council and with Facebook to develop an application that we will be launching, along with a number of our utility partners, in April to present energy-efficiency information, linkages, comparisons, and to create a public discourse about energy efficiency in social networks. I would encourage you to look that up in April and sign up.

That concludes the content portion and I know that we've got a couple of questions already. We'll start with the questions that came in in advance of the session then get to any other questions that the group has.

Q&A

Q: The first question is about the sustainability and long-term impacts of the program.

Josh: As Todd mentioned, Center Point has been running the program in Minnesota for a little over two years; across the nation, Opower is now entering its fifth year running the usually energy-efficiency programs.

Across the board, we've seen year over year increases in impact, which leads us to believe that we are not yet at a maximum savings level. Some reasons for that is that consumers tend to find new ways to save over time. They discover and start to understand additional technology, and so they all tend to become more efficient. Also over time, the program changes. We've built this as a soft square, as a service delivery, and that allows us to innovate on an ongoing basis what our customers need to find new ways of presenting information and presenting opportunities and delivering the information through different channels that helps to sustain and increase the level of savings. We anticipate that the savings will be there for a very long time, and certainly the five-year trajectory to date has shown that.

Q: What about the environmental impacts of printing and mailing reports?

Josh: Naturally, we would prefer not to send truckloads of mail in order to drive energy efficiency. However, I think you'd agree that your inboxes are more crowded than your mailboxes, and one of the realities of delivering messages that are useful for families to consume is that you need to give it to them, at least occasionally, in a format that can be easily shared.

That leads us back to a paper printed and delivered format. Our goal in limiting impact is to ensure that our messages are delivered to the right recipient expeditiously and to do that in a low-impact way. We use recycled paper, soy-based inks, and we monitor load factors on trucks to ensure that full trucks are going out when we deliver things. We also use a geographic distributed print production model that allows us to print and produce these materials close to their destination.

On the point of ensuring deliveries so we can ensure that all this work is not going to waste, we partner with other software companies and directly with the U.S. Postal Service to ensure that we have the best and most up-to-date addresses for the delivery of the home energy reports. As you saw in the presentation, we do anticipate over time that this messaging will migrate more and more towards electronic delivery. We still don't know the particular timing on that.

Q: What's a therm? You were talking about therms saved. Can you just briefly go through that?

Todd: One therm, that's how we bill our customers. That's the unit of energy we use, and it's equal to 100,000 BTU or British Thermal Units, or if you're more familiar with cubic feet it's equal to 100 cubic feet of natural gas.

Q: Is the relationship between that and kilowatt hours?

Todd: There can be a conversion to kilowatt hours, but it's completely a different method of energy measurement.

Q: Do you have any analysis of what consumer segments are using the Opower reports? Is that mostly early adopters?

Josh: Early adopters are very interested in Opower type products, but the way that we deliver this program is through an opt-out design. One of the things that is important to us for the measurement and verification process is to invite people to join and begin using these tools to manage their energy. As a result, we basically start sending out the report to a random sample of customers, and then within that we also pick people who are high users, or people who are low income, or people who live in a certain region of the service territory.

We are finding that consumers across all demographic and socio-economic segments are using the program and saving equivalently.

Q: There's always this question about what about the people who over achieve compared to their neighbors. Do they maintain their good savings or do they relax and conform? You use both types of norm appeals so perhaps this would be a time to talk about that.

Josh: Norming does move both ways. We worked with the behavioural scientist, Dr. Robert Cialdini very early on in designing these programs (he's a professor at Arizona State University and the author of a book called *Influence: The Psychology of Persuasion* that you may have seen. Dr. Cialdini warned us about the fact that folks on both ends of the spectrum will migrate to the norm, will migrate to the middle, so low users might begin to use more.

The way we combat that is by using an injunctive method, which is basically to assign a positive value to the behavior of using less. The way we do that is actually in the report.

If someone is a low user, we can congratulate them and thank them and say that's good or that's great. By acknowledging and recognizing that low-using behavior, we've been able to offset the risk of over achievers migrating back to the centre.

Q: Do you have the ability to back out distortions in the data such as changes in the number of residents, aging kids, etc.?

Josh: We spend a lot of resources in pursuing data domestically and internationally to fuel this analytic engine. There are some things that are fairly easy for us to catch, and some things that are harder. Something like kids that are moving from an every-other-day bathing schedule to a twice-a-day long shower schedule is hard for us to anticipate. Even the number of residents in a home is something that is dynamic and harder to track.

In cases like that, we tend to ask consumers through the web, e-mail, or the paper reporting channels to tell us more about themselves. Naturally, the more we learn, the better we can make the recommendations and the comparisons for them. Things such as changes in their home size, changes in equipment in their home, if they were to buy a new high-efficiency furnace from Center Point Energy or through a Center Point Energy rebate program, but other things are more difficult to determine.

Q: Do you anticipate a time when the Opower norming method could be used without a control because the savings are so well proven?

Todd: We're in our third year of the program and we're constantly working with our vendor Opower to do the analysis on the savings calculations. I think we're doing that as we speak and gaining a better understanding of an all natural gas utility in a cold weather market. To answer your question, I defer a little bit to Josh, but I know as we get more data, the control group can get smaller, it doesn't need to be a one-to-one relationship, and I believe that we're moving towards having better analysis to move towards that, more of a sustained approach to savings without having to use such a large control group.

Josh: Over time we can reduce the value of the control group, and we all need to anticipate the time when utilities may want to send messaging to all of their consumers and be able to deem a savings value or take accepted value over time. Some utilities are already – some of the ones who have been working on this for a long time are already researching what that might look like. The thing that we have to be careful about is moving too quickly to a deemed value kind of approach – that could create the risk that the results could become assailable over time.

We want to take those steps very carefully and thoughtfully, but over time I do anticipate there to be, at least in some states, that kind of movement.

Q: How do you manage privacy issues around collecting data from the program, specifically sticking with regards to gathering information from coupon use?

Josh: The privacy issues are fairly straightforward. Opower works as a service provider to utilities so all of the data that we collect through the utility channel is data that continues to belong to the utility. Specifically, when you ask about coupon programs, I think we're in good shape when people are opting into something such as when they take the coupon and they redeem that at Home Depot or Lowes or Sears. They are opting into using that tracking method in order to get their instant rebate.

Recently, Opower published data security and privacy standards that we have decided to adopt and that are, I think, ahead of the marketplace because we do take this very seriously, and I think at least on those two points we're well in the clear. You can go to the Opower website and look at the whole data privacy standards.

Q: You started to touch on this when you were talking about the Facebook application you're working on. Are there any plans to deploy conversations/interactivity between users?

Josh: Yes there are, and in fact we find that users already share information with each other across the residential fence, so to speak. The best example is the use of the social networks to drive that interaction, and we'll continue to look for ways that people can share information with each other because that's one of the ways that we can drive greater competency in using energy-efficient methods.

Sucheta: I think conversations are going to be starting full force when the Facebook application launches and we're, of course, always continuing to look for other ways to increase that conversation/interactivity.

Q: How are the programs being funded?

Sucheta: Across the board in the U.S., most of our programs are funded through the utilities directly. There are instances where they have regulatory requirements that are imperative to get energy-efficiency savings through behavioural changes. By and large, all of our funding comes through that.

Todd: In the state of Minnesota, there is a requirement for investor-owned utilities to achieve 1.5% of energy savings, and that's from our legislature. We actually have a small surcharge on our customer's bills per unit of measurement or per unit of energy that goes into the conservation improvement program. In essence, the programs are rate payer funded. That's similar in Arkansas and Oklahoma. They just recently got approval through their PUC to launch a similar program to the one we have in Minnesota. That's also a rate payer funded program, and is driven by the two states.

Q: Can you talk a little bit about the potential scale of annual energy savings that a behavioural program like this can achieve?

Josh: The scale of energy savings is quite large. With Center Point Energy, for example, we see energy savings that were between 10 and 15 therms per customer annually. We

don't find that that trails off in any segment of the population. For most utilities, behavioural energy efficiency can represent on the order of 50% of the total achievable energy efficiency for the utility. Imagine the residential share of savings for most utilities from installed measures; behavioural energy efficiency is at least as big as that number.

Q: The savings from improved control for heating and cooling sounds very significant. Where did you get these figures from?

Josh: I'll have to play a little bit ignorant on a couple of those studies. But our partners at Honeywell have studied the impact of the thermostat and how it can impact those things. For example, when I talk about 20% on cooling, it's 20% of the cooling load, which for many utilities represents 40% of the total energy and function for a consumer, and those are based on years of studying the setback thermostat that they've been developing. If you wanted to get some more information about that I'm sure I could get a better citation for you.

Q: How do the behaviour programs that you're and other utilities are offering interact with and affect the other utility energy-efficiency programs that you see being implemented at the same time?

Todd: They work very, very well together. I mentioned earlier about our home energy audit program getting a pretty substantial ramp up when the reports actually promoted that program. What we also do is we have a pretty substantial residential portfolio on our energy-efficiency programs, and in the tips portion of the report we always offer opportunities for things such as low-flow shower heads, water heater rebate, heating system rebate, etc., and it allows the people who are receiving the reports to direct themselves to our energy-efficiency website and actually toggle back and forth between the two sites to get all the information required to submit one of those rebates.

They do work very well together, and we definitely have seen a positive up kick in participation on some of our programs.

Sucheta: To provide a little bit more information on that, we've seen anywhere in the range of a 20% to an over 60% increase in program participation for report recipients. On average, we've gone very conservative and said about a 20% increase in that program participation. In whatever program that we choose to promote, it can be the energy audit that Todd was referring to earlier. We've done things with appliance recycling, etc., so any of them really get that same positive uplift as an affect of the home energy report programs.

Q: You just mentioned potential of 50% savings resulting from behavioural change. How does this relate to the graph shown earlier in the presentation showing 1.5% to 3.5% electricity savings for clients?

Josh: Thanks for asking me to clarify that. Fifty percent of the savings potential for a utility is what I was referring to. In particular, in the Pacific Northwest we looked at

energy-efficiency potential and saw that that was on the order of 10% to 15% of total energy consumption for residential households. When we looked at the behavioural resources that we could deploy, it seems that on the order of 5% to 8% has the potential to come from behavioural and the other half coming from other measures. Hopefully that clarifies it. Not 50% of total consumption, it's 50% of likely energy savings potential.

Q: What percentage of people picks up more substantial energy savings measures after the audit?

Todd: It's one of those questions that a lot of utilities ask themselves, and there's not a lot of research out there. I think there's a little research out there that says people that get audits really mean well and don't implement a lot of things, and we've done some things at Center Point Energy to try to change that, home energy reports being one of them. If they consistently get messaging showing them that they're using more energy and sign up for a goal on the website, I think they're more focused on reducing their energy usage.

We've also launched a new program called the Home Energy Squad, which is a low-cost direct install program. It's highly promoted at our energy audits so we have our truck come out and actually do those things that customers know they should be doing but never get around to. We cover all the labor on that.

We've just started having our auditor do call backs to customers who have received audits to see if they have any other questions or needs – just kind of follow up to see if they're implementing some things. That's a good question industry wide, so we're trying a few things including the home energy reports to try to move the needle a little bit.

Q: Are these programs focused on single-family homes as opposed to multi residential buildings?

Josh: In general, these programs are focused more often on single-family residences, although in a few locations we've done some testing around the impact for multi-family residences and found the percentage savings to be roughly the same. From a cost-effective perspective, we usually start with higher users, but it does work for everyone.

Q: You mentioned that you're getting the same kinds of results across the board in different states, different places. Are you noticing any differences between your different customers in different places?

Sucheta: This is a question that our analytics team has recently just taken up or has been looking at for the past several years since the start of our program. What we've found is that across the board, regardless of income, demographics, or any kind of political affiliations, we aren't seeing that much of a difference in terms of savings. With that being said, of course we're going to save more in the winter with Center Point than we are in the summer, because it's cold in Minnesota, but the point is that demographically, income-wise and politically, we are seeing consistent savings across all of our customers.

It's something that we just recently triple verified by our analytics team in diving into that research.

Q: If the Opower reports were opt-in rather than opt-out, do you think the take up would be as good, or how much worse would it be do you think?

Josh: There are a couple things that are challenging when you try to run an opt-in program. We're able to turn on 125,000 residents for Center Point Energy fairly quickly in about a matter of 90 to 120 days when we do an opt-out program. With opt-in, achieving scale takes a lot longer, and I would suspect that not nearly as many of these people would participate. I think Todd would probably agree. The other thing that is a challenge is that when you run an opt-in program, you end up with natural bias from the people who opt in, and from a measurement and verification perspective we need to report these savings to state regulators and others.

We need to have some kind of baseline, and by running it as an opt-out, it creates a very clean method for doing that. The other statistical methods for measuring have issues that are tough to overcome. So, the short answer is no, I don't think the take up would be as good. I do think the savings per customer would be higher on average, but that would be explained by the selection bias that would then complicate our measurement.