

# Designing and marketing an innovative carbon offset program

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## ABSTRACT

Pacific Gas and Electric (PG&E) and NW Natural have found that selling carbon offsets is an innovative way to educate their customers about climate change, as well as promote energy efficiency and their commitment to the environment. PG&E uses this program to invest in forest conservation and methane capture projects at dairy farms and landfills that go beyond California's renewable portfolio standard. NW Natural, a gas-only utility, has found that supporting biodigesters resonates well with their customers because it is turning the problem of waste management into a good, renewable gas.

These utilities have learned that investing in high-quality, independently verified carbon-offset projects is vital to maintaining credibility in carbon offset programs. The utilities also need to offer good energy efficiency programs to help customers reduce their energy use and emissions. Education is also key to helping customers understand the link among energy use, greenhouse gas emissions, and their climate impact.

PG&E has used a variety of marketing messages targeted to residential and commercial segments to drive more than 30,000 customers to sign up for ClimateSmart in the first 18 months of the program. NW Natural has used humorous tag lines and a Smart Car giveaway to promote their Smart Energy offering and have enrolled more than 6,200 residential customers, or just over 1 percent of their residential customers since launching the program in October 2007. Both utilities stress the importance of energy efficiency as part of the message in order to help customers reduce their energy use before considering offsets.

## Introduction

Carbon offsets represent a reduction in greenhouse gas emissions from an activity or project in one place to compensate for or to balance out emissions that are produced elsewhere. Purchasing offsets provides funding for emissions reduction projects such as methane recovery, biogas, and forest conservation. Demand for carbon offsets has been growing steadily as more consumers and organizations want to take action to reduce their impact on climate change or "carbon footprint." This is fueling tremendous growth in the market, which turned carbon offsets into a \$112.5 million industry in the U.S. in 2007 (Hamilton et al. 2008). Selling carbon offsets offers another option for utilities—especially gas utilities—to address climate change, be perceived as good environmental stewards, and empower their customers to act to reduce their climate impact.

Carbon offsets have drawn criticism, in part because of the challenges associated with ensuring their credibility. Since no single certification standard exists, there are conflicting notions about how to verify that offset purchases contribute significantly to a project's financial viability and how to determine whether they meet the criteria of additionality, meaning that the project reduces emissions below the quantity emitted in a business-as-usual scenario. Other criticism centers on the perception that companies that buy offsets are simply "greenwashing" their image to appear more environmentally conscious, instead of carrying out energy efficiency measures to reduce their own energy use.

PG&E was the first to launch a carbon offset product in June 2007. NW Natural and the Sacramento Municipal Utility District launched an offset program later that year. Green Mountain

Power in Vermont also sells offsets through Native Energy, and N.C. Green Power recently received approval from the North Carolina Public Utilities Commission to sell offsets to customers of Duke Energy, Progress Energy, and municipal and cooperative utility customers in North Carolina. This paper is based on presentations and discussions from an E Source web conference held in May 2008, “Empowering Climate Action through Selling Carbon Offsets to Customers” (LeBlanc, 2008). E Source invited PG&E’s climate protection and analysis manager, Robert Parkhurst and Bill Edmonds, director, Environmental Policy and Sustainability for NW Natural to share how they developed innovative carbon offset programs. This paper takes a closer look at the rationale behind the utilities’ decisions to create these programs, the projects they are investing in, how successful the programs have been, and the types of messaging and channels they are using to promote the programs.

## **Pacific Gas and Electric (PG&E)**

PG&E launched the ClimateSmart program in June 2007. According to Robert Parkhurst, climate protection and analysis manager, Pacific Gas and Electric, “We were the first out of the gate to offer something that allows our customers to reduce their greenhouse gas emissions above and beyond what they’re doing in energy efficiency and renewable energy. We developed this with a broad group of stakeholders: environmental groups, regulators, and partners at universities such as the University of California at Berkeley.” PG&E is a founding member of the California Climate Action Registry, and the company has had its greenhouse gas emissions independently verified since 2002. As a result, Parkhurst says, “We have a pretty good idea of what our carbon footprint is, and that’s how we were able to develop the tariff for this.”

### **About the Program**

ClimateSmart is a voluntary program in which customers can choose to pay a surcharge on their monthly bill in order to make their energy use climate neutral. The cost is based on usage—PG&E charges approximately a quarter of a cent per kilowatt-hour and 6.5 cents per therm. The typical home in PG&E’s service territory generates 5.3 tons of carbon dioxide (CO<sub>2</sub>) emissions per year. Therefore, a typical customer would pay about \$5 a month to offset their emissions. The California Public Utilities Commission has required PG&E to contract for at least 1.5 million tons of greenhouse gas emissions reductions by December 31, 2009. The utility invests 100 percent of this money in projects that reduce or sequester greenhouse gas emissions.

PG&E contracts for emissions reduction projects through a competitive bidding process, similar to how the utility buys renewable energy and conventional energy. The first RFP was issued in June 2007 around the same time that ClimateSmart launched. PG&E was looking for up to 250,000 tons worth of reductions and received six project proposals totaling reductions of more than 400,000 tons. Parkhurst says, “Of the six that bid, we were pleasantly surprised that most of them were high quality. We had one that really just didn’t understand the market and didn’t understand how to structure a transaction. We provided a lot of feedback to them and encouraged them to apply again.” PG&E issued a second RFP in mid-2008 for up to a million tons of emissions reductions.

“The biggest challenge is to ensure that projects can show that the funding for offsets is being used to create additional emission reductions, above and beyond what they’ve already been doing,” notes Parkhurst. “A great example is the Garcia River Forest Project, which already had a conservation easement in place; the land had already been preserved, so what was our money going toward? We found that we were able to further reduce the harvest below what the project would have done under its business-as-usual case of conservation easement.”

Once projects are under contract, then all the greenhouse gas emission reductions are verified, registered, and then retired with the California Climate Action Registry. Ensuring that projects are retired is crucial because it means that the offsets will not be used to meet any future reduction requirement. PG&E does not contract for any renewable energy projects for ClimateSmart because these projects are already required under California's renewable portfolio standard. The utility only looks for projects that go beyond the current standard.

All of PG&E's projects are verified under the protocols of the California Climate Action Registry which currently include forestry and methane capture from dairy farms or landfills. "Forestry is really important in California because the state is losing 40,000 acres of forest land annually," says Parkhurst. "This program is an opportunity for us to help provide a new financial model to protect these forests. There is also huge potential for dairy-methane capture projects. There are currently 1,900 dairies in California totaling approximately 1.7 million cows, and fewer than two dozen are capturing their methane. The average cow generates about the same amount of greenhouse gas emissions as your average SUV. There are also a number of landfills in the state that have not captured their methane, so those are opportunities for projects as well."

## **Marketing**

During the first year of the program PG&E promoted ClimateSmart through four bill inserts reaching about 20 million customers each time, through direct mailers that went out to approximately 1.9 million customers, and through e-newsletters and the web site. Direct mail brochures have by far been the most effective sign-up channel for the utility, but other outreach efforts have also proven successful. Soon after the launch, utility sales representatives did some concerted outreach at community events and with government partners which resulted in a large number of sign-ups.

The utility completed rounds of message testing via focus groups and in its first set of ads and brochures, will help develop much of the language PG&E now uses. For example, the brochure utilizes more of an emotionally-driven message that utilizes messages and images that evoke protecting the environment for future generations and empowers customers to take action to reduce climate change. The thought is that this message will help bring in more of the younger generation. In addition, PG&E tries to stress energy efficiency first by educating customers about ways to reduce energy consumption, renewable energy second, and finally carbon offsets.

The communication doesn't end once a customer decides to enroll in ClimateSmart. PG&E sends an e-newsletter to all of ClimateSmart customers to keep them updated on the status of the program. Moreover, every customer who signs up for ClimateSmart receives a kit that includes a magnet, a window cling, and a letter thanking them for enrolling in the program.

## **Program results**

In less than 18 months after the program's launch, PG&E has enrolled more 30,000 customers in ClimateSmart, the majority of whom are residential customers. ClimateSmart participants represent customers from more than 600 cities across PG&E service territory so the program has broad appeal—not only from cities you'd expect like San Francisco and Berkeley—but also from other cities like Fresno or Bakersfield and areas that have air-quality issues. The utility also earned some positive media coverage in 2008 including 38 print articles, 15 TV/radio stories and 4 stories in ethnic media.

PG&E decided to launch ClimateSmart for several reasons. First, PG&E considers itself an environmental leader. The utility boasts that it "walks the talk"—its shareholders put up the money to enroll all of PG&E's facilities in the program. Parkhurst says, "Our CEO believes that climate change is

happening, that humans are partly to blame, and that the time to act is now.” As a result, the program is really trying to accomplish a few things. “First, we are trying to bring credibility to the offset market. We’re trying to show that these types of transactions can happen and can be high quality. The second thing is that we’re trying to learn from it by road-testing these protocols. The third and I think the most important reason for launching ClimateSmart is that this is an opportunity to educate our customers about climate change.”

PG&E expects only about 4 to 5 percent of their customers to sign up, which is typical for this type of customer-choice program. However, the utility is looking at this as a way to educate all their customers about energy efficiency, renewable energy, and what they can do to reduce their carbon footprint. “What we found in our focus groups is that a typical consumer doesn’t recognize that by plugging something into the wall, they are generating CO<sub>2</sub> emissions somewhere else. They get the link between energy use and dollars, but not the link among energy use, CO<sub>2</sub>, and climate change. We’re hoping that this program will help change that,” says Parkhurst.

## **NW Natural**

NW Natural, a natural gas utility serving customers in Oregon and southwest Washington, became the first gas-only utility to offer a carbon offset product in September 2007. NW Natural introduced its Smart Energy program not long after PG&E launched ClimateSmart and, like PG&E’s program, Smart Energy is a voluntary program that allows customers to offset the greenhouse gas emissions associated with their natural gas use.

### **About the Program**

One of the distinguishing features of the Smart Energy program is its specific focus on biogas projects. As a natural gas utility, NW Natural felt this was the most obvious place for it to start selling carbon offsets to its customers. According to Bill Edmonds, director, Environmental Policy and Sustainability for NW Natural, “There are not a lot of biodigesters in the marketplace. It’s something that needs those carbon dollars to happen, and once you’ve got it up and running, you really have a wonderfully measurable offset. Second, it really resonates with our customers that we, a gas company, would be working on biogas.” In focus groups with customers about the potential of offering other types of high-quality offsets, such as tree planting or industrial efficiency efforts, customers didn’t understand offsets particularly well. Edmonds notes that aligning the offset projects with the utility’s core business and educating customers has been key to the program’s success.

NW Natural is aware of the wide variety of carbon offset options available in the marketplace and why customers are understandably confused by them. In this instance, Edmonds feels that it’s the responsibility of the utility to offer a credible program. “We’re as concerned about climate change as our customers are, and I think that’s really the first and most important reason why we’re offering it. We believe it’s real, and I think our customers expect us to be helping them do something about it. As a decoupled utility, we don’t make more money by selling more gas, and it puts us right on the same side of the table as our customers. We want them to use our product as efficiently as possible.”

Customers that enroll in Smart Energy can choose between paying a monthly charge based on their energy usage that would make them carbon neutral or a fixed-price option based on the gas use of an average household. According to Edmonds, due to the fact that some of their gas customers have a lot of variability in their bill, a fixed-price option is appealing because customers know exactly how much they will pay extra each month. NW Natural set the fixed-price at \$6 based on the average household gas usage and their surveys indicated that this amount was an important price point to stay under each month.

So who pays the up-front costs to fund the projects and marketing costs? NW Natural shares the costs among its shareholders, Smart Energy participants, and a deferral account that is spread among all

customers. Edmonds notes that the deferral account was a point of controversy, “but the sharing between these three parties ended up being a reasonable compromise in the regulatory process that seemed fair and equitable.”

Instead of issuing its own RFP, NW Natural decided to procure offsets by partnering with The Climate Trust, a respected non-profit organization that provides high-quality carbon offset projects. This partnership preserves the transparency and credibility of the program and provides assurance to NW Natural’s customers that they are purchasing a high-quality offset. According to Edmonds, The Climate Trust assists NW Natural “soup-to-nuts” by identifying projects and contracting with them, monitoring, and verification and all the other pieces that need to be part of a good, high-quality offset program. NW Natural was its own first customer to sign up for the Smart Energy program. The utility currently has a five-year pilot program in place in which it is offsetting all of its natural gas use for heating its own facilities.

## **Marketing**

Since Smart Energy program launched in early September 2007, NW Natural has received a lot of positive media attention. “I like to brag that we got 28 positive stories in the media,” says Edmonds. “A story ran in the *Oregonian*, and it’s pretty unusual for a utility to be on the front page with a positive story.” He notes that NW Natural has a fairly modest marketing budget so it’s very important to leverage positive media in order for people to learn about the Smart Energy product. “I think it’s fair to say that, just like on the green power side, people need to hear about a product like this a few times before they decide to enroll.”

Some of this positive media attention has been garnered through NW Natural’s messaging around energy efficiency. NW Natural believes the efficiency message needs to come first when talking about a carbon offset program and Edmonds believes they’ve done a good job of doing that thus far. “We’ve got cloth shopping bags that say ‘Reduce what you use, offset the rest.’ That’s the rallying cry for Smart Energy and really needs to be if you’re going to avoid some of the charges about offsets being guilt payments or just something that energy hogs use.”

Early in the development stages of the program, NW Natural conducted surveys among its customers and found that approximately 81 percent of its customers said that it should be offering some sort of option like a carbon offset program. While NW Natural would “be thrilled to get 81 percent” to sign up for its offset program, its expectations are considerably more modest. NW Natural has set a goal of 3 percent residential participation over the five-year program pilot phase. Edmonds states, “I’d love to beat that percentage. It’s fair to say that here in the Portland area, we have fertile territory for people who sign up for green power. The unanswered question is whether someone who has already signed up for green power will also sign up for an offset program on the gas side, and we’re betting that the answer is yes.” As of November 2008, more than 6,200 customers, or just about 1 percent of the utility’s residential customers, had signed up for Smart Energy.

In view of the fact that carbon offsets are still relatively new to many people, the notion of purchasing offsets can be confusing. To address this issue, NW Natural has been providing a great deal of programmatic detail in its marketing collateral for the Smart Energy program to help educate its customers. NW Natural actually found that the customers most likely to sign up for the program tended to want more detail, the brochures for the program are “a little meatier than you might see in some marketing material.” NW Natural tries to answer questions like, “What is biogas and how does it work? How do offsets fit into the climate change discussion? What is NW Natural doing to address its own actions?” NW Natural combined those types of questions with print ads in an effort to capture people’s attention. Going beyond brochures, NW Natural also initiated a giveaway whereby every customer that signed up for Smart Energy was included in a drawing for a Smart Car. If that weren’t enough, NW Natural also posted outdoor advertising on walls and transit advertising on buses.

Edmonds notes, “We’ve found that using bill stuffers and e-mail blasts have been the most productive thus far. We’re starting some community challenges to connect energy efficiency and smart energy as much as we can. And, because the Smart Energy program is focused so specifically on biogas projects, you’ll see a lot of cows in Smart Energy’s marketing materials.”

## Final thoughts

Utilities are uniquely positioned to sell carbon offsets because they are seen as trusted sources of information about energy and efficiency. The next step utilities can take is to educate customers about how energy use affects greenhouse gas emissions and climate change. Being able to see how energy usage can be offset on a monthly utility bill may increase customers’ understanding of and willingness to act to reduce their carbon footprint. Additionally, utilities that sell carbon offsets help finance innovative projects that reduce greenhouse gas emissions and improve air quality. Leading by example empowers others to look for ways to mitigate the impacts of climate change. Moreover, it’s an opportunity for utilities to support an economic development initiative in its service area. Smaller demonstration projects may lead to larger commercialization of proven technologies and the transfer and diffusion of knowledge. Finally, it’s a way for utilities to show that they are good environmental corporate citizens.

Utilities that want to develop and market a carbon offset program may want to consider the following recommendations:

- Take steps to reduce emissions at your own facilities before buying offsets.
- Promote energy efficiency first and renewable energy second. Provide offsets for customers who want to do more.
- Invest in high-quality, independently verified carbon offset projects. This is vital to the program’s—and your utility’s—credibility.
- Take the opportunity to help your customers understand the link among energy use, greenhouse gas emissions, and their climate impact.
- Identify consumers with a strong interest in the environment and craft messages that capture their attention. This can help motivate them to act to reduce their carbon footprint.

## References

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