



Strategies

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July 2011

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Letter from the Chair

How many Tweeters, Facebookers and YouTubers does it take to screw in a CFL?

By: Carol White, AES.P Board Chair



Carol White, AES.P Chair

There is a great punch line to this joke, and I promise I'll get to it later. But what's no laughing matter is how quickly social media has taken over our world. You may have heard this fact before, but if Facebook were a country today, it would be the third-largest nation on earth, and this is up from fourth-largest just one year ago!

I can't think of any other phenomenon that is growing as fast as social media – from Facebook, YouTube, Twitter and LinkedIn to the latest, Foursquare, social media is exploding around us. Much like how the advent of the telephone a few generations ago changed how we communicated (remember when we used to write letters?), social media will reinvent the way we communicate in the future. If you've ever received an invitation to "friend" someone or to view photos on Facebook or Flickr, you've already been pulled into the new way of communicating.

Those of us in the energy industry who have not yet embraced social media will inevitably need to incorporate it into our future communication plans. According to Mashable,* 86 percent of U.S. Fortune 100 companies are already using at least one social media channel, although among utilities, I suspect that the usage rate is much lower. In an informal visit to a handful of large utilities' websites, I found only a few with social media featured on their home pages.

That is not to say utilities are not using social media to reach their customers. In a recent survey, E Source asked utilities to rate their peers in the use of social media; and Avista, Duke, Pepco, Pacific Gas and Electric, and American Electric Power were cited as the leaders in this area. But even among the social media leaders, utilities are still behind in the game compared to other industries. For example, [@DukeEnergyStorm](#) tweets about outages and other vital updates to its customers and boasts 5,610 followers. Now compare this to [@Starbucks](#), which has 1,531,016 followers.

AESP embraces social media to engage our members. AES.P's LinkedIn, Twitter and Facebook channels are equally busy and up-to-the-minute. Of them, the LinkedIn group is

Upcoming Events

Brown Bags

July 14, 2011
The DOE High Performance Windows Volume Purchase Program

July 21, 2011
"Integrating LEDs into Utility Programs"

August 18, 2011
New Homes Programs - Going Beyond the STAR?

If you would like to organize a Brown Bag, please contact Kisha Gresham at kisha@aesp.org.

AESP Training Courses

If you would like to schedule an onsite training please contact Suzanne Jones at (480) 704-5900 or suzanne@aesp.org. For more information about the AES.P Institute, click here.

Conferences

October 3-6, 2011
AES.P's Fall Conference: Customer Behavior and

the most active, fulfilling AESP's objective of providing networking, knowledge exchange and career advancement opportunities to its members. Postings and lively discussions are taking place daily, so if you join only one AESP channel, I recommend [joining LinkedIn](#).

In addition, we're planning a fun (and potentially rewarding) Twitter activity to be held during our Fall Conference in Dallas this October 3-6, so there's a reason to [follow us on Twitter too!](#)

Now, back to the headline. What is the punch line? Well, let's find out together. To illustrate my point on the inevitability of social media as well as demonstrate the benefits of real-time conversation, let's conduct a quick and fun activity. [Visit our LinkedIn site](#) before July 20, find AESP's post on this subject and enter your own funny answer. Best answer wins a prize from AESP. Even if you don't feel particularly creative, go online anyway to see what others have posted and to comment on your favorite.

Get going on social media and let the fun begin!

¹Mashable – an on-line technology resource.

Headlines

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Featured Articles

AESP News

Updates from AESP
New and Renewing Members
News Releases and Announcements

Stimulus News

The following executive summaries of current news items were written for Strategies after being compiled from various news sources.

SMUD Offers Low-income Weatherization Program

Low-income residents in Rosemont, Calif., and Sacramento, Calif.'s midtown and downtown neighborhoods will be eligible for up to \$3,500 in free weatherization improvements under a new program offered by the Sacramento Municipal Utility District (SMUD). The retrofits are part of SMUD's new Neighborhood Performance program, which offers rebates to help pay for energy upgrades for residential and business customers in

The Smart Grid - (View Prospectus)
Dallas, TX

February 6-10, 2012
AESP's 22nd National Conference & Expo
San Diego, CA

May 15-18, 2012
AESP's Spring Conference
Baltimore, MD

Have a Question...Ask AESP!

Do you need advice from your peers on your latest project or program? If so, submit your questions on AESP's listserv. To subscribe to the listserv, email your request to mailsrv@aesp.org and type "Subscribe AskAESP" and your first and last name.

Take a look at a recent question submitted on AskAESP:

QUESTION:

I'm looking for information on utilities that are not applying a NTG ratio when claiming savings from their DSM programs. What utilities are doing this? Is this a growing trend? Under what circumstances is this practice allowed?

If you would like weigh in on the above question, subscribe to AskAESP and submit a response.

 LinkedIn

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 YouTube

AESP is a member-based association dedicated to improving the delivery and implementation of

the three neighborhoods. Funded by \$2.8 million in federal stimulus money, the programs, which run through June 2013, will help pay for energy saving upgrades, such as new heating and air conditioning systems, duct sealing and new insulation. According to SMUD, the upgrades could help homeowners and businesses save 20 percent on their energy bills. The program is in addition to SMUD's Home Performance Program, which offers to pay up to \$9,000 toward the cost of energy efficiency upgrades for residents throughout SMUD's service territory. Funded by \$20 million in federal stimulus money, the Home Performance Program also provides in-home energy efficiency audits for homeowners at a discounted cost of \$99.

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From "SMUD Offers Low-income Weatherization Program"
Sacramento Bee (05/27/11)

Industry News

The following executive summaries of current news items were written for Strategies after being compiled from various news sources.

Grid Modernization Efforts: 5 Million Smart Meters

U.S. Department of Energy Secretary Steven Chu has announced that more than 5 million smart meters have been installed nationwide in an effort to modernize the electric grid. "To compete in the global economy, we need a modern electricity grid," says Secretary Chu. "An upgraded electricity grid will give consumers choices and promote energy savings, increase energy efficiency, and foster the growth of renewable energy resources." Utilities will use smart meters to obtain greater information on how electricity is being used in their service areas. In one project highlighting the involvement of energy management and the electricity grid, Florida Power & Light is deploying an advanced metering infrastructure, distribution automation technologies, new electricity pricing programs, and advanced monitoring equipment for the transmission system. The project's goal is to reduce energy losses and increase reliability. As of April 30, 1.8 million smart meters have been installed. Meanwhile, CenterPoint Energy in Houston, Tex., has undertaken a project to deploy a fully integrated advanced metering system and Web portal access to over 2.2 million customers and install advanced monitoring and distribution automation equipment. The goal is to reduce peak loads and overall electricity use while increasing distribution system reliability. As of April 30, 1.3 million smart meters have been installed.

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From "Grid Modernization Efforts: 5 Million Smart Meters"
Buildings (06/11)

Intel Research Eyes Home Energy, Building Efficiency

Intel demonstrated some of its efforts to use computing to improve energy efficiency and the use of renewable energy sources during its Research@Intel conference. The company presented a device that plugs into a regular electrical outlet and uses a home wireless network to report the power use of consumer electronics. The Wireless Energy Sensing Technology (WEST) is designed to recognize the signatures of major electrical loads in a home and transmit that information to a PC, smartphone, or TV. The prototype was a box about the size of a soda bottle, and the device could work with Intel's Home Energy Management System dashboard. According to an Intel researcher, the more detailed monitoring provided by the plug-in sensor could lead to a 15 percent or higher reduction in energy consumption. WEST is scheduled to go into trials soon. Intel also demonstrated its Eco-Sense Buildings, which use sensors to monitor indoor conditions such as temperature and occupancy and have the potential to make buildings net generators of energy. The company also is researching ways to synchronize the output of solar farms with data center electricity loads, which could scale down power use when a solar farm's output declines.

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From "Intel Research Eyes Home Energy, Building Efficiency"
CNet (06/08/11) LaMonica, Martin

management and distributed renewable resources. AESP provides professional development programs, a network of energy practitioners, and promotes the transfer of knowledge and experience.

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Can Utilities and Customers Really Work Together to Save Power?

A new report from Honeywell concludes that sometime within the next 10 years more than 20 percent of U.S. electricity demand is expected to be met by homeowners and building operators optimizing their energy use and available resources in a joint effort with their electric utilities. That change in consumption habits should account for more than 100 gigawatts of power annually, according to Honeywell, with energy consumers playing the lead role in initiatives to make the electrical grid smarter and more reliable. Initiatives such as permanent cuts in energy use, temporary use reductions during periods of peak demand, and more on-site generation and storage will help make that change happen. Applications that partner homeowners and building owners with their utilities, giving them the ability to automate their responses to changes in electricity costs and reliability, will be critical parts of the effort to improve energy efficiency. "The real gains come in combining all these efforts," says Paul Orzeske, president of Honeywell Building Solutions. "The smart grid is not just about making utility equipment and networks more intelligent. The other side of the coin is providing energy users with the technology that allows them to participate in the dynamic exercise of balancing supply and demand." Honeywell's report emphasizes that utilities and their customers will need to get accustomed to the idea of working closely together. Fortunately, the report also points out, the technology to make that happen already exists; and it notes that an added bonus is that energy efficiency is cheaper than generating new power.

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From "Can Utilities and Customers Really Work Together to Save Power?"
SmartGridNews.com (06/14/11)

DOE and The Appraisal Foundation Announce New Partnership to Focus on Energy Performance and Building Appraisals

As part of the Obama Administration's efforts to improve commercial building efficiency 20 percent by 2020, U.S. Energy Secretary Steven Chu on June 13 announced a partnership with The Appraisal Foundation that will help expand access to energy efficiency and building performance information for commercial buildings and help American businesses to reduce energy waste. Under the new partnership, the Department of Energy and The Appraisal Foundation will work to ensure that appraisers nationwide have the information, practical guidelines, and professional resources they need to evaluate energy performance when conducting commercial building appraisals. This will help enable investors, building owners and operators, and others to accurately assess the value of energy efficiency as part of the building's overall appraisal. "Providing appraisers with the tools to accurately include energy performance when they place a value on a commercial building will help American businesses and institutions save money by saving energy," said Chu. "If better performing buildings have a higher value, it will help enable the upfront investment for energy efficiency upgrades." In 2010, commercial buildings accounted for about 20 percent of all the energy used in the United States. In conjunction with The Appraisal Foundation, DOE will develop information and educational tools relating to valuing green buildings based on the Uniform Standards of Professional Appraisal Practice. These tools and resources will help appraisers appropriately include energy performance and sustainability in valuations.

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From "DOE and The Appraisal Foundation Announce New Partnership to Focus on Energy Performance and Building Appraisals"
U.S. Department of Energy (06/13/11)

Data Makes the Difference

Utilities are facing a new set of challenges related to cost effectiveness, improved predictability, broader adoption, and deeper behavioral changes that requires them to evolve their demand response (DR) and energy efficient (EE) programs. Smart meter data is critical to the revolution in EE and DR programs that utilities will be offering. Detailed energy consumption data has the potential to change the way people use energy as never seen before, and utilities need to view the data as a gold mine to the design and implementation of EE and DR programs. The data is the power behind the smart meters that will drive the advancement of the DR and EE programs of San Diego Gas & Electric (SDG&E). The utility in 2008 established its Smart Meter Program, using smart metering and meter data management to provide accurate and detailed data to help it and customers make more intelligent decisions. SDG&E is on pace to be the first utility in the country to complete the installation and implementation of new smart meters; more than

90 percent of its customers have smart meters, and it plans to have 2.4 million installed by the end of 2011. Although such an initiative might not be best for every utility, the value of the data and the measured approach to the programs is applicable to nearly all seeking to address tomorrow's challenges.

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From "Data Makes the Difference"
EnergyBiz (06/11) Vol. 8, No. 3, P. 36 Haslund, Chris; Hanna, David

Energy Efficiency at Zero Upfront Cost

Energy efficiency projects at zero upfront cost might appear out of reach in today's stormy economy, but there are financing mechanisms that could allow businesses to implement such projects now. Financing an energy efficiency project would spread out the implementation costs over time, making the cost per year less than the savings cash flow. The payments would be fixed for a length of time and very similar to a mortgage or car payment. The big difference is a car will not 'save' money like an energy project, which might have a 25 percent return on investment. Instead, the savings will be more than the finance payments, even if you pay 15 percent interest. For many energy management projects, the cost of financing is usually less than the cost of delay, and the simple payback for financing a project is effectively zero. Assume a project costs \$100,000 and saves \$28,000 per year for 15 years, could get funded if the client has \$100,000 in cash to fund it, and has a Net Present Value of \$102,700 and an Internal Rate of Return of 27 percent. If the client finances the \$100,000 for 15 years at 10 percent per year, it would pay \$13,147 each year to the bank. In this case, the project generates \$14,853 each year for the client; the organization has not contributed any upfront funds, which means the IRR value becomes infinity and the simple payback is immediate. In addition to the benefits of financing, organizations can take advantage of utility rebates, tax refunds, credits and other sources of free money to boost the financial return on an energy efficiency project.

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From "Energy Efficiency at Zero Upfront Cost"
Buildings (05/11)

Canadian Province Making Buildings More Energy Efficient

In Nova Scotia, the government is allocating \$10 million for increasing the energy efficiency of federal buildings. According to Minister of Transportation and Infrastructure Renewal Bill Estabrooks, "Investing in energy efficiency will save money and provide cost savings that can be invested in critical programs for Nova Scotians." Estabrooks' department has conducted a number of retrofit assessments and will begin work this summer on 20 projects. Federal officials have said retrofitting the buildings so that they are environmentally-friendly is expected to yield as much as 20 percent in energy savings. Retrofitting will encompass energy efficient heating and lighting systems, as well as insulated windows and air sealing. Nova Scotia aims to reduce its energy consumption for all federal buildings by 30 percent through 2010 as part of a Climate Change Action Plan.

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From "Canadian Province Making Buildings More Energy Efficient"
Canada Views (06/07/11)

Major Office Landlords, Tenants Team up to Tackle Energy Waste

CivicAction's Greening Greater Toronto has challenged Toronto-area office building owners and their tenants to substantially cut their energy use by entering its "Race to Reduce." Developed by Greening Greater Toronto's Commercial Building Energy Leadership Council, the Race to Reduce is a collaboration between commercial landlords and tenants to bring about smarter energy use. The four-year program aims for owners and tenants to collaborate on slashing total energy use in their buildings by at least 10 percent. Office properties account for nearly 20 percent of the Greater Toronto Area's carbon emissions, 17 percent of its natural gas consumption, and 37 percent of its electricity consumption. Even before the Race to Reduce's official launch, three dozen major landlords and tenants entered 33 buildings representing 22 million square feet of office space. That accounts for one-tenth of the Toronto area's total office space. Over four years, a 10 percent reduction in these buildings alone would cut carbon emissions by 31,000 tons. That is equal to

taking 20,000 automobiles off the road for an entire year. Linda Mantia, voluntary co-chair of Greening Greater Toronto's Commercial Building Energy Leadership Council, remarks, "Office building landlords and tenants can save money, be more competitive and improve the region's environment by increasing the energy efficiency of their buildings."

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From "Major Office Landlords, Tenants Team up to Tackle Energy Waste"
Digital Journal (05/19/11)

Efficiency Pays Off for Homeowners; REU Program Gives Rebates for Retrofits

Redding Electric Utility (REU) customers in Redding, Calif., will offer all customers rebates up to \$9,000 for comprehensive energy efficiency retrofits under its new Home Performance Program, set to begin July 1. The utility had previously allowed only 20 customers to participate in the pilot program. Participating customers will receive a complete heating, air conditioning, and ventilation retrofit. The program is first come, first served until money runs out. The utility will fund the rebates from \$300,000 in ratepayer money set aside for programs to encourage efficiency and help lower-income customers pay their electric bills. The Home Performance Program is unlike any other rebate the utility has yet introduced, says Bryan Cope, who will manage the program. Highly trained contractor-technicians strive for energy efficiency, comfort, and healthy air throughout the entire house, he says. The program is aimed at customers already contemplating a major investment in a new heating, air conditioning and ventilation system. HVAC equipment and installation typically costs \$7,000 to \$13,000. The REU rebates would cover any additional cost for making sure the new ventilation system is as efficient as possible, says Dave Jackson, an account manager at the utility who works with Cope promoting efficiency. Typically, the new air conditioner would need to be only half the size of an older unit, provided the attic and ducts are properly sealed, says Jackson. REU's fledgling Home Performance Program has already drawn attention around Northern California. Pacific Gas & Electric Co. and the Sacramento Municipal Utility District have asked about it, says Cope, who recently presented results from the pilot retrofits at a San Francisco conference drawing a national audience. The Lawrence Berkeley Laboratory is considering the REU program as a test site for research on home performance in extremely hot, dry summer climates like Redding's, Cope adds.

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From "Efficiency Pays Off for Homeowners; REU Program Gives Rebates for Retrofits"
Redding Record Searchlight (CA) (05/25/11) Mobley, Scott

Interior Announces 54 New Projects to Receive \$24 Million in WaterSMART Grants, Saving Enough Water for 400,000 People

U.S. Department of the Interior Secretary Ken Salazar recently announced that the Bureau of Reclamation has chosen 54 new projects in western states to receive a total of \$24 million in WaterSMART Water and Energy Efficiency Grants. The projects will save an estimated 102,221 acre-feet of water each year, enough water for more than 400,000 people. Additionally, 24 of the projects are expected to save over 15 million kilowatt-hours of electricity per year, enough for 1,300 households. "Drought, climate change, growing populations, energy demands, and basic environmental needs are stressing our finite water and energy supplies," says Salazar. "Since we established the WaterSMART program, the 92 grants awarded will result in savings of enough water for an estimated 950,000 people. WaterSMART grants will also save energy, and help America become less dependent on sources of energy that are costly, non-renewable and harm the environment." Established in 2010, the WaterSMART program encourages all bureaus and the Department of the Interior to pursue a sustainable water supply for the nation, and establishes a framework to provide federal leadership and assistance on the efficient use of water, integrating water and energy policies to support the sustainable use of all natural resources, and coordinating the water conservation efforts of several Interior offices.

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From "Interior Announces 54 New Projects to Receive \$24 Million in WaterSMART Grants, Saving Enough Water for 400,000 People"
U.S. Department of the Interior (05/19/11)

The Power of Integration

The U.S. government and the electric utility industry recognize energy efficiency and demand response programs as powerful tools to help customers reduce energy consumption and utility bills and assist utilities with curbing the ever-growing demand for power. These are synergies, according to the Electric Power Research Institute (EPRI), that could dramatically curb the national demand for power. Over the next two decades, EPRI estimates that the integration of demand response and energy efficiency programs has the potential to reduce demand for electricity by 14 to 20 percent below projected levels during peak periods, when demand is highest. However, despite the likeness of the two types of programs, utilities have been slow to tap into their synergies. According to a report by the U.S. Department of Energy and the Environmental Protection Agency, there remains a disparity among the utilities' programs that support both energy efficiency and demand response programs. Differences in how energy efficiency and demand response programs are financed and a lack of utility staff and contractors with expertise in both fields contribute to the lag. The report also emphasizes a fear among energy efficiency managers that demand response mechanisms will inhibit them from meeting their ultimate goal of reducing energy in the long term. Energy efficiency guarantees energy savings over time, while demand response only encourages people to shift their use. The Sacramento Municipal Utility District (SMUD) is working with these elements in an attempt to better meld energy efficiency and demand response program goals. Ed Hamzawi, SMUD's customer applications coordinator, says the trick to integrating the two for small commercial and residential customers is simplicity. "Our goal is to make the terms 'energy efficiency' and 'demand response' easy to understand," says Hamzawi. "We need to get away from making distinctions [between the two] as much as possible."

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From "The Power of Integration"
Intelligent Utility (05/11) Lundstrom, Laurel

Featured Articles

Enlighten Your Field Staff: Missed Opportunities in Demand Response Deployments

By: Joe O'Malley, President, Mad Dash, Inc.



Joe O'Malley

Long before your customers get to experience the ground breaking, life changing systems you have provided, they will be impressed by the installer. The impression could be positive or negative, but either way an impression is made. Take advantage of the first critical customer touch and educate and enlighten your installation crew.

As the technology you are delivering has increased in complexity, so have the skill sets of the installers. Yesterday's installations occurred in the backyard where the installers needed training on door hangers, fences and dogs. The installation of utility hardware occurred outside the house with or without the customer present. Back then a simple completion report at the end of the week was all that the program manager had to be concerned about.

Things have sure changed. Now we have tablet PCs and cellular- and IT-based recorders, Zigbee meters and exotic displays that show usage, and Web portals to display customer consumption. With this advanced hardware have come increased skill sets for field staff. Today's field staff skills include HVAC, electrical, electronics, IT, and even carpentry.

You have many opportunities to improve your program by leveraging these skills beyond the requirements of the past.

Recently utilities and consultants have begun to leverage these skills, but many still tend to treat installation as a necessary evil and fail to leverage the installation crews to obtain the most data possible. In the following paragraphs, I hope to plant some ideas to more effectively take advantage of this customer touch point and great opportunity.

With the aforementioned skills, the field staff is now more capable than ever to handle jobs and tasks in one trip that were historically done through multiple visits or utilizing internal engineering staff. Examples may include market research, saturation studies, load

response studies, evaluation walk-throughs, program education, upselling, training, disbursement of customer incentives and, of course, installations.

Here are some practical tips that we have learned through our many years of successful experience:

Energy Audits: Recently our company was engaged in a project installing energy efficiency measures in residential homes, but we also utilized those same participants for saturation study participation. It was critical to utilize staff who had experience with energy audits to ensure sound data gathering.

Electronics: Today's field evaluation work no longer begins and ends with the installation of a logger or recorder. Now there are opportunities to query the memory of the installed devices to gather significant data on system operation. To ensure success, utilize computer-literate field staff with backgrounds in electronics.

IT Knowledge: The advent of home area network installations has demanded that field staff have IT knowledge. Do not assume that the best HVAC or electrical technician is proficient in creating a home area network. Knowledge of broadband, DSL, switches, routers and encryption is critical to your project's success.

Customer Education: The area of customer education is still typically underdeveloped. Everyone agrees that it is a good idea, but there is little thought put into the actual training aspect. Often there are barriers to overcome. When customer behavior is part of the pilot, there is a hesitance to inform the field staff, so the field staff has no influence. Very often the customer site is not immediately ready for use due to database or user name password reasons, so little training takes place; or there are promises of Web-based training at a later date. With a little thought, you can easily overcome these barriers. Give your field staff all the program details and instruct them on what they can and cannot say. Then include actual customer training at the conclusion of the installation, so that the premises can be used as a demonstration site.

Customer Incentive Tracking: Customer incentives are growing. At any one point there could be over \$10,000 in money orders or gift cards in the hands of the field staff, but tracking systems remain casual. Make staff accountable for the incentives and make the tracking system easy by adding the money order or gift card number to the actual field paper work. Also assign one office person to track and distribute the cards to each staff member.

Customer satisfaction is key to the success of your program. And like it or not, the responsibility for customer satisfaction is in the hands of the field staff, so arm them with the best training, and enable them with the best tools, and educate them with all details of the program. In short, empower your program and increase your customer satisfaction.

Experience from Actual Implementation of Default Dynamic Pricing for Commercial and Industrial Customers

By: Josh Bode, Freeman, Sullivan & Co.



Josh Bode

To date, the vast majority of commercial and industrial (C&I) customers have been exposed only to rates that are effectively flat and do not reflect the time-varying nature of wholesale market prices or the fact that peak demand drives the need for additional capital investments in peaking power plants. With Critical Peak Pricing (CPP), customers face a high-price signal during peak hours on high-demand days that reflect the avoided cost of building additional peaking power plants. The higher prices are offset by a reduction in off-peak prices, demand charges or both. Recruiting customers onto time-varying tariffs can be costly, and enrollment rates are typically quite low. An alternative recruitment strategy involves default enrollment. Default pricing enrollment is still a voluntary tariff, but it changes the customer's starting point. Default pricing can lead to much higher enrollment and greater exposure of customers to price signals. California is currently

implementing a significant change in pricing strategy that will place all non-residential customers on default CPP rates over the next several years. This process began in 2008 in SDG&E's service territory and expanded to SCE's and PG&E's service territories in 2009 and 2010. Below we summarize some key findings that were obtained from an analysis of

customer choice decisions and usage behavior during the 2010 program year. More detailed findings are contained in the *2010 California Statewide Non-Residential Critical Peak Pricing Evaluation Report*.¹

While dynamic pricing rates have many benefits – they better reflect system costs, reduce cross-subsidies and lead to reductions in peak loads – altering hourly prices can change customer bills even if they do not change customer behavior. In other words, the introduction of default CPP tariffs will produce structural winners and losers. Under conventional, non-time-varying rates, all customers within a given rate class experience the same price for electricity regardless of the timing of their electricity use. Those who use significantly more electricity during high-cost periods are usually being subsidized by those who do not. Dynamic pricing changes this situation so that those who use a lot of energy during high-cost periods pay a higher price for it. Because of their electricity use patterns, some customers benefit from the transition to default CPP and opt-out of Time of Use (TOU) while others lose without any change in their electricity use pattern. In practice, the effect of default CPP on customer bills is also tied to usage behavior. Some customers are able to shift their electricity use to lower-cost periods, effectively altering their load profiles and potentially reducing their bills. Default dynamic pricing has been a controversial topic, and up until recently arguments for and against it were based on theory and assumptions rather than empirical data. The results presented here are among the first empirical results concerning what customers actually do under default conditions.

Two key questions are:

Do customers stay on default tariffs?

And do those who do so reduce peak period demand, on average?

The 2010 California experience provides the largest body of evidence to date regarding non-residential customer choices and price response on default dynamic pricing. The experience is important for several reasons. First, while residential dynamic pricing with opt-in enrollment has been extensively piloted and studied across the country, there have been far fewer studies of C & I price response to critical peak pricing under either opt-in or default enrollment. Second, the California results are based on a full-scale program, not a pilot. By the summer of 2010, 15,000 customers had been defaulted onto CPP tariffs and roughly 7,100 remained on the tariff. Combined, these customers accounted for approximately 2,200 MW of system coincident peak load. On average, PG&E, SCE and SDG&E called on roughly 1,650, 4,100 and 1,350 customers, respectively, to reduce loads on event days. Third, the implementation of default CPP was not limited to only very large customers. Roughly 2,800 of the 7,100 accounts that remained on CPP used less than 100 kWh per hour and over 700 of them used less than 50 kWh per hour. Fourth, in the next three years, an additional 1.2 million medium and small C&I accounts are scheduled to default onto CPP across California. Combined, these currently account for roughly 8,500 MW of demand during system peak conditions. These customers are smaller than those in the first phase of implementation, but most of the load is linked to medium customers that substantially overlap customers that were already defaulted. Fifth, the 2010 implementation of default CPP included a wide variety of customers by size, industry and climate. The results provide a wealth of information about how different customers respond to dynamic pricing.

So did customers respond? PG&E called nine critical peak events and obtained an average load reduction of 23.0 MW, or 3.9 percent of the average reference load on event days. SCE called 12 critical peak events, including an event on September 27, when the peak temperature in downtown Los Angeles reached 110°F. SCE participants provided an average load reduction of 30.7 MW, or 2.8%. SDG&E called four critical peak events in 2010. The approximately 1,350 accounts enrolled on SDG&E's CPP tariff provided an average load reduction of 18.8 MW, or 5.3% of estimated peak load across all events. Several factors explain the magnitude of load reductions. Almost all customers defaulted onto CPP transitioned from pre-existing time-of-use rates that already provided very strong incentives to shift or reduce electricity use during peak periods over summer months.²As a result, the price response is smaller than what would be expected if customers were to transition from flat rates to CPP prices.

Among the key findings from this analysis are:

- When defaulted onto dynamic pricing, a substantial share of customers try them out and remain on them.
- Customers defaulted onto CPP tariffs do, on average, reduce consumption during peak event hours without enabling technology.
- For all three utilities, industrial businesses such as manufacturing and wholesale and transport provided larger load reductions than did commercial customers.

- Customers of various sizes and in different climate areas engaged in price response.
- Bill protection did not have a statistically significant effect on price response.
- Price response persisted into the second and third years of participation for SDG&E customers. Percent impacts for SDG&E customers decreased by half a percentage point for each additional year of participation in the program. In other words, percent load reductions decreased, but by very little. While the results are statistically significant, it is not possible to infer whether the small decay in percent load reductions will continue or will level out after customers have experienced multiple seasons of CPP events.
- Customers that had previously voluntarily enrolled in CPP or were dually enrolled in other demand response programs produced substantially larger load impacts than the average customer.

Several outstanding policy questions remain. To date, impacts for small C&I customers have been based on opt-in pilots. Relatively little is known about their participation and pricing response in actual programs, and even less is known about their response under default dynamic pricing. In addition, for both small and medium customers, relatively little is known about how offering enabling technology affects acceptance of these rates. In practice, many customers are concerned about bill volatility both with and without dynamic pricing. Another key research question is how coupling dynamic pricing with balanced payment plans, which eliminate bill volatility, affect acceptance of default dynamic rates and price response.

¹ The full report is available at www.fscgroup.com/news/2010-california-non-residential-cpp-evaluation.pdf

²The peak to off-peak price ratio for the pre-existing TOU rates ranged from 2.6 to 4.8. The peak to off-peak ratio is a measure of the strength of the incentive to shift load from peak to off-peak hours. The calculation includes both differences in energy prices (\$/kWh) and period-specific demand charges.

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AESP News

Updates from AESP

Careers in the Energy Efficiency Industry with AESP President (PODCAST)

Recently, AESP President and CEO Meg Matt was interviewed for Total Picture Radio by Peter Clayton about the job outlook in the energy efficiency industry. Tune in to the podcast to hear Meg's take on where the jobs are, opportunities for new grads, salaries in energy efficiency jobs and how AESP can provide the training that professionals in this burgeoning industry need. Click here to [listen to the Total Picture Radio podcast](#).

Hollywood is Calling - Your Close-ups are ready!

Thanks to GoodCents for offering photography services at AESP's annual Spring Conference in Atlanta. If you have not already received your photos from GoodCents, contact kim@aesps.org for the link.



Tom DuBos

AESP Board member joins EnergySavvy

Tom DuBos, a member of the board of the Association of Energy Services Professionals, recently joined EnergySavvy as its National Sales Director. In his new role, Tom will be responsible for growing EnergySavvy's national footprint and working with its utility clients and industry allies.

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New and Renewing Members

New Individual Members

Ann Livingston, Snugg Home
Barry Gilbert, PowerDirect Marketing
Ken Dulaney, Advanced Energy
Mark Kessler, Apogee
Nate Bellino, Ecos
Stuart Hayden, PowerDirect Marketing
Tim Strickland, TBW Energy Solutions

New Group Members

TBW Energy Solutions

Renewing Group Members

San Diego Gas & Electric
BPA
PowerDirect Marketing
MidAmerican
Georgia Power
D&R International
Conservation Services Group
Itron
Apogee
Energy Federation Inc.
Integral Analytics
NEEP
We Energies

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News Releases and Announcements

[Green Neighborhood Program Helps 1,138 of Orlando's Least Efficient Homes Save Energy and Money](#)

[Michaels Energy Releases White Paper on Next Generation HVAC System Design](#)

[Michaels White Paper - New Construction EE Programs Need Overhaul](#)

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