How do you educate utility customers about energy efficiency?

An Ask E Source answer

By Shelby Kuenzli, Laura Gardner

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Q: How do you educate customers about energy efficiency?

A: Utilities tailor their energy-efficiency education programs for specific audiences, such as renters or students. They provide education through their websites and social media, exhibits, and events.

Efficiency education for renters

When utilities develop education programs for renters, they often focus on reducing costs according to type of residence or household appliance.

MGE. Madison Gas and Electric (MGE) makes a booklet for renters that includes questions to ask before they move in. It also contains tips for saving energy after they've moved in. The booklet advises renters to ask what kind of heating system is in the house or apartment. It explains, "The common types of heating systems are electric baseboard, forced air, hot water or steam. The most expensive to operate is electric baseboard—at least twice as much as natural gas."

MGE also offers its Average Energy Use and Cost search, which presents energy-use information of any address in its service territory. The tool serves residential customers who are considering buying or renting a new home. Customers can see high, low, and average energy use and costs. They can also review a projected budget payment plan for the address.

PSE. On request, PSE provides high and low utility bills from the past year for a specified address. Its MyData service lets customers view energy-usage data for multifamily residences with five or more units. For renters, PSE offers educational materials on electric and gas operating costs for common household items.

Austin Energy. In Austin Energy's service territory, the City of Austin Energy Conservation Audit and Disclosure ordinance requires multifamily residences to post the property's average energy-use intensity in a common area. This allows residents to see the estimated average utility cost per square foot. Austin Energy has found success in educating renters through a partnership with Foundation Communities, an affordable-housing and community-support nonprofit organization.

Efficiency education for K–12 students

Online videos

Utilities and other organizations use videos to educate kids about power plants, operations, energy production, renewable energy, energy efficiency, and safety.

Xcel Energy. Two children guide the interactive Virtual Power Plant Tour to show viewers what it's like inside a power plant and how electricity is made.

Portland General Electric (PGE). For its e-SMARTkids program, PGE posted five videos:

- Electricity basics
- Conductors and insulators
- Outdoor electrical safety
- Indoor electrical safety
- Fallen power lines

CenterPoint Energy. CenterPoint's Safe & Smart resources for kids and teachers include videos for grades K–12.

Snohomish County PUD. The utility has more than 15 educational videos for all audiences, including its Conservation Sensation Animation video for kids. It appears in the Energy Conservation Tips section of the online video library.

Energy-efficiency curriculum

Pacific Gas and Electric Co. (PG&E). PG&E provides energy-efficiency and conservation curriculum to K–8 students and teachers through its Energenius educational programs. Outreach efforts included a mailing to 10,000 teachers as well as a display at 11 teacher conferences. More than 82,000 students received these educational materials, which was 126% of PG&E's goal. The program collaborated with 12 statewide organizations: 3 county offices of education and 9 organizations that provide environmental resources or conferences for educators.

More ideas for teaching kids and explaining kilowatt-hours

The E Source report Entertain and educate kids with energy-efficiency kits and e-learning during COVID-19 details other ways to talk to children about efficiency. To help all residential customers make sense of energy usage, read our report Educating residential customers about kilowatt-hours.

Southern California Edison (SCE). SCE's LivingWise program is an educational program developed and implemented by Resource Action Programs, an education outreach services company. According to SCE's report Process Evaluation of the 2006–2008 EARTH Education & Training Program (PDF), during academic years 2006 to 2007 and 2007 to 2008, 281 schools in 98 school districts in SCE's territory taught the LivingWise curriculum to approximately 52,000 students in 568 classrooms. The instructional materials correlate with state curriculum standards.

In a single lesson or over multiple lessons, teachers covered six topics by conducting the activities included in the teacher guide. The Conservation At Home topic included activities that students completed at home while using a kit of conservation items. Students could complete the activities over the course of a week.

Each student received a workbook and a LivingWise activity kit of energy- and water-saving tools. Students also received a certificate of achievement and a coupon for a free Get Wise wristband.

Efficiency education on utility websites

Xcel Energy. The Ways to Save page on Xcel Energy's website offers resources about saving energy. The topics are organized by customer needs. For example, on the One-Handed Tips page, videos explain how to save energy with a single hand while doing household chores, such as laundry (clean the lint trap) and cooking (use a pot with a lid).

Hydro One. Hydro One devotes a tab to saving money and energy on its home page. Like Xcel Energy, Hydro One's Saving Energy page presents different categories so customers can easily find the information they need. Categories include residential and business customers and financial assistance.

Efficiency education on social media

Hawaiian Electric Co. On Pinterest, Hawaiian Electric shares information about energy efficiency (**figure 1**). Its posts include general energy-saving tips, ways to calculate the energy consumption of household appliances, and energy-efficient recipes.

Figure 1: Hawaiian Electric educates customers through Pinterest

Hawaiian Electric draws customers to its website or offers tips directly in the post. Fitting for Pinterest, food features in a Hawaiian Electric post. The utility teaches about energy expenses with simple explanations of cost per hour.

SCE. On Instagram, SCE shares videos with energy-saving tips about topics ranging from home design to saving energy while watching the Super Bowl (**figure 2**). With such a diversity of topics covered on social media, SCE catches the attention of different audiences. It also positions itself as a resource for all energy-efficiency information.

Figure 2: SCE's Instagram videos present quick tips to lower energy use

In its Instagram posts, SCE reflects current events or targets a trend.

View this post on Instagram

A post shared by Southern California Edison (@sce) on Jan 31, 2020 at 1:04pm PST

View this post on Instagram

A post shared by Southern California Edison (@sce) on Feb 10, 2020 at 1:49pm PST

Xcel Energy. The utility uses Instagram and Facebook to share energy-saving tips (**figure 3**). It promotes ways to save both energy and money. On Facebook, Xcel Energy shared tips that were specific to winter weather.

Figure 3: Xcel Energy teaches through Instagram and Facebook

Xcel Energy presents quick tips in comments, images, or video. Lighthearted and informative videos demonstrate how easy some efficiency upgrades are.

View this post on Instagram

A post shared by Xcel Energy (@xcelenergy) on Jan 10, 2020 at 1:31pm PST

Events and in-person education

Several utilities host energy technology centers that provide exhibits, demonstrations, and training programs for residential and business customers.

Sacramento Municipal Utility District (SMUD). The utility's approach to customer education involves a balance of teaching some information and providing interactive experiences. This combined approach lets SMUD keep the information current.

SMUD offers free classes and workshops as part of its Residential education program. The events are open to the public. Customers can learn about energy safety, new technologies, energy efficiency, and more. At the utility's customer service center, it presents exhibits on solar panels, insulation, cool roofing, and structural insulated panels.

Interactive exhibits appear throughout the center, including:

- *Wind turbine.* A large wind turbine is in the lobby. Next to the turbine is a video that explains the basic science and benefits of wind energy.
- *Lighting classroom.* This meeting space is retrofitted with different kinds of lighting technologies so customers can compare them. Visitors can experiment with color temperature and brightness and see the differences between commercial and residential lighting.
- *Rotating exhibit.* A designated rotating exhibit space changes every six months. Past projects included a side-by-side comparison of thermostats and a solar-energy exhibit.
- *Energy home.* SMUD's home-energy exhibit, E-House, is a full-size model of an energy-efficient house. The home previously demonstrated shell improvements such as insulation, skylights, and solar tubes. Now it features retrofits, smart meters, appliances, and other technologies. It also features an outdoor area with HVAC and pool pumps. The home is as interactive and visual as possible. Customers can use iPads to control the house's technologies and products so they can see the impact of their actions on the home's energy usage.

The rotating art exhibit in the center's lobby is always popular. SMUD installs new art every three months and features themes relevant to the utility, such as reusable products and environmental issues. This program catches customers' attention and raises their awareness of energy issues.

Georgia Power. In its Customer Resource Center, Georgia Power provides advice and hands-on demonstrations in five areas: food service, residential, manufacturing, electric comfort, and electric transportation. Georgia Power displays energy-efficient products designed for the home in a showroom and in its Smart Neighborhood. The showroom also presents information about rebates and incentives.

Roseville Electric. The Roseville Utility Exploration Center educates students, residents, and businesses about energy and water conservation as well as other environmental issues. The center's Green House contains exhibits that feature "facts about common household items and activities that contribute to climate

change, along with alternative actions that can undo harmful impacts. Visitors can also use their own power to light an incandescent and LED bulb and make a hair dryer work."

OG&E. The Energy Technology Center at OG&E hosts community and business meetings. The building uses state-of-the-art green technology and is LEED certified. Visitors can tour OG&E's Energy Technology Center virtually via YouTube.

PGE. PGE offered Energy Classes including seminars, webinars, and online trainings on a range of energy-efficiency technology topics. In-person seminars included topics on energy champions, strategic energy management, and LEDs and lighting controls. Most of these classes were free to PGE commercial and industrial customers. PGE stopped offering these classes in January 2020.

PSEG. In 2020 PSEG opened the Energy & Environmental Resource Center. Serving Salem, New Jersey, and surrounding communities, it develops exhibits on electricity and climate change. It also hosts teacher workshops, civic and community meetings, and company functions.

National Grid. National Grid and Clark University partnered to open the Sustainability Hub in Worcester, Massachusetts. Trained Clark students lead tours of the hub, work with customers, and give presentations to the community. These smart energy ambassadors also connect with local schools. The hub hosts hands-on demonstrations of smart meters, personalized customer education, and a community exhibit that highlights local energy-efficiency efforts.
