



// EMERGING ENERGY SOLUTIONS FOR RESIDENTIAL CUSTOMERS

Case Studies



Edison Electric
INSTITUTE



// **EMERGING ENERGY SOLUTIONS FOR RESIDENTIAL CUSTOMERS**

Case Studies

// **UPDATED OCTOBER 2019**

Prepared by
EDISON ELECTRIC INSTITUTE

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The Edison Foundation

**INSTITUTE for
ELECTRIC INNOVATION**

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Edison Electric Institute
701 Pennsylvania Avenue, N.W.
Washington, D.C. 20004-2696
Phone: 202-508-5000
Web site: www.eei.org

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*Forthcoming case study

Note: An electronic copy of this report (including updates) is available at <http://www.eei.org/future/Documents/SolutionsForResidentialCustomers.pdf>, and at <https://www.edisonfoundation.net/iei/publications/Documents/SolutionsforResidentialCustomers.pdf>



// INTRODUCTION

Today, customer expectations of their local electric company are changing and often are set by other industries. To assist EEI member companies in reimagining the customer service model and creating a more seamless experience for residential customers, EEI developed case studies that highlight the different ways in which EEI member companies are moving forward to reimagine customer service. These case studies—developed as part of the EEI Customer-Centricity Initiative—cover five key areas.

- Smart home energy management;
- Online energy marketplaces;
- Low- to moderate-income customer solutions;
- Customer notification and engagement; and
- Residential bill payment options.

To give customers instant access to their energy use data, more control over their energy use, and opportunities to save money, electric companies today are investing in energy management mobile apps. Supported by technology and data, the **smart home energy management** case studies demonstrate how companies are delivering an intuitive and personalized home energy management experience.

To meet customers' expectations of service and convenience, EEI member companies are creating online energy marketplaces. The **online energy marketplaces** case studies show how companies can deliver an online retail and advisory experience that helps customers evaluate, compare, and purchase energy-saving products.

To personalize service and provide solutions to customers who would benefit most from lower energy bills, electric companies are using technology, data analytics, web portals, and partnerships. The **low- to moderate-income customer solutions** case studies demonstrate how personalization and partnering are helping low- to moderate-income customers save energy and money.

As customer preferences and expectations change, electric companies are investing to improve how they communicate and engage with customers during the moments that matter—receiving the monthly bill, experiencing an outage, or signing up for a new rate plan. The **customer notification and engagement** case studies illustrate how EEI member companies are personalizing service and offering an improved customer experience.

To give customers more options for paying their electric bills and different information on their bills, EEI member companies are making bill payment easier and bills easier to read. The **residential bill payment options** case studies show how companies are expanding payment options for customers and are reducing or eliminating payment processing fees.

The goal of these case studies is to spark ideas that will help you continue to reimagine customer service and to share some good ideas that may make sense for your residential customers. //

// SMART HOME ENERGY MANAGEMENT

Electric companies today are investing in energy management mobile apps that give residential customers instant access to their energy use data, more control over their energy use, and opportunities to save money on their energy bills. The case studies in this chapter highlight how EEI member companies are leveraging technology and data and are partnering with technology providers to reimagine energy efficiency and demand response programs. Companies are focused on delivering an intuitive and personalized home energy management experience that integrates smart, connected in-home devices with direct customer energy control, plus customer engagement opportunities.

The advancements underway, powered by smart energy technology, app-based energy management, and improved use of smart meter data, are building toward a customer-centric, connected, and optimized smart home environment.

// BENEFITS INCLUDE

- Enabling connected home energy services, such as device-level energy visualization and smart device management and mobile control;
- Engaging customers more effectively in energy efficiency programs;
- Increasing customer participation in demand response programs, including bring your own device;
- Educating customers about their energy usage and providing personalized solutions;
- Integrating with voice assistants, like Google's Assistant and Amazon's Alexa, for more streamlined energy management;
- Using renewable energy more efficiently;
- Enabling third-party aggregators to create innovative solutions for customers to better manage energy use. //





It's Your Power App

// HIGHLIGHTS

So far,
67,000
AEP Ohio customers have
downloaded the
IT'S YOUR POWER
app.

Of those customers
with the app,
10,460
have installed the
ENERGY BRIDGE.

At end of 2018, the app
was made available to
500,000
residential customers with
SMART METERS.

AEP Ohio began a targeted rollout of its 'It's Your Power' app in April 2017 to 65,000 select residential customers (single-family homeowners with a smart meter installed). The app has been downloaded by 67,000 AEP Ohio customers to date, including more than 40,000 households with smart meters. AEP Ohio is providing the Powerley Energy Bridge at no cost to qualifying customers. So far, 10,460 customers have installed the Energy Bridge, of which more than 3,000 have installed a Powerley smart thermostat.

At the end of 2018, AEP Ohio began actively marketing It's Your Power to 500,000

residential customers who have smart meters installed. By mid-2019, 750,000 households and small businesses are expected to have smart meters, and the It's Your Power app, the Energy Bridge, and Powerley smart thermostat will be available to all of them.

AEP Ohio customers can use the app and Energy Bridge to set an energy budget for their homes by energy use or dollar amount. Options include "lower my use," "maintain my use," or "set a custom target." AEP Ohio also is using the It's Your Power app to enroll customers in a new demand response pilot.

In the future, AEP Ohio plans to expand and target enrollment of It's Your Power to

focus on congested distribution circuits. In addition, in the near future, AEP Ohio has plans to help customers manage electric vehicle charging via the Energy Bridge. //

// **CONTACT**

Dave Tabata

Manager, Consumer Programs,
Marketing, and Customer Experience
American Electric Power
dwtabata@aep.com



Advanced Technologies Rewards Program

// HIGHLIGHTS

In 2018, APS launched

3

CUSTOMER REWARDS PROGRAMS

that leverage smart energy technology.

40

customers are testing residential-scale

BATTERY ENERGY storage systems.

To take advantage of excess midday solar,

200

customers will be equipped with **GRID-INTERACTIVE** electric hybrid heat pump water heaters.

In 2018, Arizona Public Service (APS) launched three new programs that leverage technology to align power demand in targeted areas to times when there is abundant solar energy during midday and to reduce load at more expensive peak times. The rewards programs incent APS residential customers to adopt one of three in-home technologies—smart thermostats, battery energy storage, or grid-interactive smart water heaters—enabling them to better manage their energy use and to use renewable energy already on the energy grid more efficiently.

In summer 2018, APS launched the **Cool Rewards** program—a bring-your-own-device program—that leverages eligible smart thermostats to help customers shift electricity usage outside of the higher-priced, on-peak hours of 3 to 8 p.m. To date, 6,000 customers have enrolled. The program provides APS with the flexibility to adjust the thermostats remotely up to 20 times per year to reduce usage during peak hours.

Prior to a Cool Rewards event, thermostats are adjusted to pre-cool the residence to maintain comfort during the actual event. Participating customers receive a \$25 bill

credit per thermostat upon enrollment and a \$25 bill credit per thermostat annually for as long as they remain in the program.

Phase II of the rewards programs currently is being implemented through **Storage Rewards**, in which 40 select residences that are on an APS service plan that includes a time-of-use rate and a demand charge (customers can choose among two different options) will receive a participation bill credit of \$500 to help APS test the effectiveness of battery energy storage. The 7.2kW/20kWh battery will be owned and managed by APS, charging it during off-peak hours and discharging it during peak energy demand periods. In addition to delivering peak demand benefits to the energy grid, participating customers who are on these rate plans will see direct bill savings.

The final phase of the rewards programs is the **Reserve Rewards**, which will install energy-efficient, grid-interactive electric hybrid heat pump water heaters, at 200 residential homes at no cost to the customer. Customers will own the water heaters, and APS will provide an instant rebate for the full installed price of the equipment. The water heaters feature larger storage tanks (up to 80 gallons) that will allow them to heat a home's water when excess solar generation is available and to store it for later use. These customers also will be on demand-based rate plans that will provide them with opportunities for significant bill savings by shifting their peak demand.

These new programs will help APS better understand how demand-based rate structures, technology, and customer behavior can influence system load shape and deliver customer savings. APS will be

studying the energy and load shape impacts of the programs and customers' savings, and participant surveys in late 2019 will measure the effectiveness of the programs on customer satisfaction. //

// CONTACT

Renee Guillory

Energy Innovation Program Consultant
Arizona Public Service
renee.guillory@aps.com

DTE

Insight App

// HIGHLIGHTS

In 2017,
25,000
 customers using both the
INSIGHT APP
 and the
ENERGY BRIDGE
 achieved an average
 energy savings of
8%.

THE DTE
INSIGHT APP
 saved
21,000+
MEGAWATT-HOURS
 of electricity in 2017.

The
INSIGHT APP
 provides bill alerts,
 appliance health
 monitoring, and more.

DTE Energy launched the DTE Insight home energy management app in partnership with Powerley in 2013. DTE customers have downloaded the app more than 400,000 times, and more than 175,000 unique customers are using the Insight app.

DTE customers also can request an Energy Bridge, which automatically connects to a home's smart meter and allows the Insight app to monitor and control—in real-time—all the smart and connected devices in the home. The Insight app, combined with

the Energy Bridge, delivers device-level usage data to customers with 99.8 percent accuracy.

For example, the Insight app combined with the Energy Bridge provides customers device-level visualization of energy use, displaying in real time the amount of energy (in watts) a customer's HVAC system is using; an aggregate of "always-on" load; and the energy use of any device plugged in with a smart plug. Customers can access and adjust a connected thermostat and control (turn on or off) other connected devices. The Insight

app continuously analyzes customers' historical use data and compares it to real-time data so that customers can track usage over time and adjust their use to save energy and money.

The Insight app is a powerful customer engagement tool. It generates, and DTE can send through it, a variety of push notifications to customers, such as high bill alerts, energy product or services recommendations, or even whether a coffee maker was left "on" or a refrigerator door left ajar. The Insight app is so accurate that it can detect appliance degradation, serving as an appliance health monitoring service, and recommend repairs or replacement.

Customers who regularly use the Insight app save energy. Based on 2017 data, energy savings for 25,000 customers who logged five or more app sessions over five or more days during the year averaged 2.29 percent using just the app, and an additional 5.68 percent when also using the Energy Bridge, totaling approximately 8 percent energy savings on average. This energy savings amounted to nearly 21,000 megawatt-hours of electricity in 2017. The Insight app is part of DTE's residential behavioral energy efficiency programs. //

// CONTACTS

John Boladian

Director, Energy Efficiency

DTE Energy

john.boladian@dteenergy.com

Jeffrey LeBrun

Manager, Energy Efficiency

Residential Programs

DTE Energy

jeffrey.lebrun@dteenergy.com



Residential Pay 4 Performance

// HIGHLIGHTS

Smart Meter Data
POWERS
P4P
home energy
management solutions.

P4P uses
CalTRACK
METHODS
to determine
energy savings.

PG&E awards
aggregators per actual
kWh
RESULTS
recorded by customers'
smart meters.

Pacific Gas & Electric Company's (PG&E's) Residential Pay for Performance (P4P) program leverages smart meter data to enable vendors—or "aggregators"—to create innovative solutions for customers that can help them reduce, and better manage, their energy use. Historically, energy retrofit programs have worked by offering up-front incentives to customers to upgrade their buildings to save energy. Now using smart meter data, PG&E pays aggregators based on measured energy savings. P4P aggregators can offer a tailored suite of home energy management solutions without having to rely on prescriptive measures or custom, site-specific engineering calculations.

PG&E has enrolled four third-party aggregators—Home Energy Analytics, Franklin Energy, ICF, and Build It Green—to offer residential customers smart home technology, behavioral tools, retrofit services and financing solutions. The third-party aggregators provide residential savings across their portfolio of energy management solutions at a competitively solicited rate that is significantly less than existing programs. PG&E currently awards \$7.5 million in contract opportunities to its aggregators, with payments earned based on measured energy savings.

P4P's approach rewards aggregators based on the actual results they achieve as recorded by the customer's smart meter.

To calculate payable energy savings, PG&E uses the CalTRACK method, an open source platform that makes it easy to track retrofit savings, implemented by Open Energy Efficiency. PG&E uses weather-normalized smart meter data to produce energy efficiency resource curves that provide data on energy savings by the hour. This enables PG&E to provide price signals to vendors to drive energy savings at the appropriate time and to reward ongoing customer engagement.

Customers also benefit as P4P ensures that PG&E customers only are paying for savings that materialize at the customer meter. The P4P aggregators are energy management partners for customers, and their solutions create an environment where customers remain engaged and are rewarded continuously for their measurable and persistent energy savings.

To date, more than 700 customers have been served through the P4P program. Going forward, PG&E plans to scale the P4P program model within the entire energy efficiency program portfolio and expects thousands of customers will sign up for P4P energy management services before the end of the year. The model offers cost efficiencies to both participants and non-participants alike and provides ongoing performance tracking and feedback to allow programs to pivot in real-time. With program results supported by smart meter data, P4P programs can make energy efficiency into a dependable and predictable demand side resource. //

// CONTACT

Ben Brown

Senior Program Manager,
Residential and Partnership Programs
PG&E
Ben.Brown@pge.com



// ONLINE ENERGY MARKETPLACES

To meet customers' expectations of service and convenience, EEI member companies are creating online energy marketplaces. The case studies in this chapter demonstrate how marketplaces deliver an online retail and advisory experience that helps customers evaluate, compare, and purchase energy-saving products like smart thermostats, LED lighting, smart power strips, and other services through a trusted provider—their electric company.

The technology behind electric company online marketplaces also enables instant rebates as a service (either online or in retail locations), which simplifies the buying process and allows customers to see quickly and easily which products are discounted or rebated, to determine final cost, to verify their eligibility, and to redeem rebates instantly. Online energy marketplaces provide both energy efficiency and customer engagement benefits.

// BENEFITS INCLUDE

- Giving customers a one-stop shop for energy-efficient products and services, including instant rebates and installation services;
- Providing a trusted, easily accessible, centralized place for customers to find energy-efficient products, smart thermostats, solar services, and other energy products, as well as information on home energy efficiency services, availability of rebates, and local store availability;
- Enabling in-store instant rebates, which further simplifies the customer-buying process and helps electric companies meet customers at the point of purchase;
- Providing price transparency for customers comparing electric plans in their states;
- Enhancing engagement with customers and increasing customer satisfaction. //





An Exelon Company

BGE Marketplace

// HIGHLIGHTS

BGE's Marketplace
has attracted more than

200,000

UNIQUE VISITORS.

BGE customers have
purchased more than

21,000

ENERGY-EFFICIENT
products from the BGE
Marketplace.

Baltimore Gas and Electric (BGE) launched its energy marketplace in late June 2018 to provide residential customers with a convenient and informative way to compare and purchase energy-efficient products. To date, the BGE Marketplace has attracted more than 200,000 unique visitors, and BGE customers have purchased more than 21,000 energy-efficient products. Customer feedback has been positive, earning the BGE Marketplace a net promoter score of 74 in April 2019 (highest possible is 100), and an average customer satisfaction rating of 80 percent, which is considered excellent within the national e-commerce average.

The BGE Marketplace offers rebated

smart thermostats and LEDs. BGE offers its customers a \$100 rebate on ENERGY STAR® qualified smart thermostats and offers several models to choose from on the marketplace. Customers can compare products and select the best fit for them. In addition to rebated thermostats and lighting, BGE customers also can compare and purchase connected home products, such as smart switches, air filters, and water-saving products. BGE also offers buyer's guides for each product category, to help customers better understand which products are best for them and how to achieve the most cost or energy savings.

Energy savings achieved through the BGE Marketplace are part of an overall energy

efficiency strategy designed to meet the EmPOWER Maryland energy consumption reduction goals. BGE's Marketplace program scope and reach will continue to evolve.

During the 2018 holiday season, BGE began offering instant rebates on smart thermostats in Lowes and Home Depot retail locations. BGE also plans to integrate demand response enrollment with smart thermostat purchases made through the marketplace. Going forward, BGE aims to drive more efficiency and to broaden the customer value proposition per transaction by offering more comprehensive energy efficiency solutions for customers.

BGE's Marketplace is part of a marketplace rollout across Exelon Utilities, with future enhancements planned at BGE, ComEd, and PECO, as well. //

// CONTACT

Ajit Apte

Director, Customer Strategy &

Governance

BGE

Ajit.Apte@bge.com



TrueCost

// HIGHLIGHTS

TrueCost is visited by
**SEVERAL HUNDRED
THOUSAND**
visitors annually.

Nearly
1/2
OF USERS
who purchase plans on
TrueCost return again.

Website redesign has
INCREASED
plan selection by
4.5x.

CenterPoint Energy Intelligent Energy Solutions (a non-regulated affiliate of CenterPoint Energy) has a TrueCost electricity shopping website that provides electric price transparency to residential customers comparing electric plans in Texas. Since 2002, when electricity deregulation started in Texas, residential customers have had the option to choose their electricity service plan from a variety of retail electric providers (REPs).

In summer 2012, TrueCost was launched to provide Texans the convenience of comparing multiple REP plans on one website, helping them better understand and compare the 'all-in' cost across hundreds of service plans from dozens of REPs, including

user fees and local taxes. In the competitive retail electric marketplace, many plan providers advertise rates that escalate after an introductory period; include difficult to discern eligibility restrictions; or assume a customer's usage falls within a sweet spot (e.g., exactly 1,000 kilowatt-hours) to better position tiered rate plans or those that offer bill credits. Often customers don't know how much power they use and can become confused and upset about having to pay higher than anticipated electric bills.

Since CenterPoint Energy doesn't generate or sell electricity in Texas, the TrueCost site is designed to provide independent, credible, and objective information to the hundreds of thousands of customers who use TrueCost

annually to compare REP plans and make informed decisions about their electricity plan. A key feature of the TrueCost website is the ability to upload smart meter data to develop a more personalized, month-by-month cost estimate based on historic electricity usage.

In 2018, the TrueCost website underwent a redesign that focused on improving its ease of navigation and having a mobile-friendly design to support a purpose-driven customer journey. The new website has been well received, with nearly half of all unique visitors who compare plans on TrueCost returning to use it again. Plans can be filtered and sorted by:

- Home profile
- Contract length ranging from 3 months to 3 years
- Features such as online bill pay, 100 percent green, or no usage charges
- Estimated average bill
- Customer reviews

All certified REPs in good standing can have their plans listed on TrueCost, for which they pay a flat fee when they accept customers. Currently, there are approximately 30 REPs on TrueCost with each offering several plans. The purpose-driven website design has led to a 4.5X increase in customers selecting plans on the TrueCost site. //

// CONTACT

Troy Donovan

Business Development Manager

CenterPoint Energy

Troy.Donovan@centerpointenergy.com



Connected Homes REV Demonstration Project

// HIGHLIGHTS

Since July 2016,

2.2M

CUSTOMERS

have visited Con Edison's Marketplace.

Customers purchasing products via the Marketplace have saved

134,000

MEGAWATT-HOURS

of electricity.

Nearly

180,000

PRODUCTS

have been sold on the Con Edison Marketplace.

As part of New York State's Reforming the Energy Vision (REV) initiative, Con Edison started the Connected Homes REV Demonstration Project in 2016. The Connected Homes Project was designed to increase adoption of Distributed Energy Resources (DERs) and to test new revenue models. Today the main focus of the Project is an online **Marketplace**, powered by Enervee.

Residential customers visit the Marketplace to shop for energy-efficient appliances, electronics, lighting, smart thermostats, solar services, and more. While on the site, visitors can compare products by price, read customer reviews, and apply

for available rebates. The Marketplace uses the Enervee Score to compare a product's efficiency against similar-sized models based on industry standards, and to estimate the amount a customer can save on energy compared to the average product.

Using marketing channels such as social media, search engine, and email promotions, Con Edison has encouraged about 2.2 million customers (1.3 million unique) to visit the user-friendly site, accessible via desktop or mobile device. Visitors are able to create online account profiles, save their searches, get price alerts, and access product rebates.

Customers also are able to purchase

certain products directly online such as light bulbs, smart thermostats, and power strips, as well as to obtain instant rebates. Altogether, the Marketplace directly has sold nearly 180,000 of these products. It is a highly successful avenue for customer engagement, enabling customers to make smart purchasing decisions and ultimately to save on their energy bills. To date, Con Edison's customers cumulatively have saved 134,000 megawatt-hours of electricity through acquiring more efficient products available on the site.

Con Edison and Enervue partnered with Pick My Solar to assist customers in their research and evaluation of private (rooftop) and community solar options. The solar application helps connect customers in the market for solar with vetted local installers and to evaluate bids. To date, the Marketplace generated around 3,200 solar leads, resulting in 250 solar transactions (approximately 150 private solar installations and 100 community solar subscriptions). Recently, Con Edison and Enervue partnered with HomeAdvisor to help customers find qualified contractors for home improvements, product installation, maintenance, and repairs.

The Connected Homes Demonstration Project is scheduled to end in 2019 and is undergoing an independent evaluation and internal review. To date, this Project has generated positive outcomes, effectively engaging with customers and building an active market for energy-efficient products and services. //

// CONTACT

Cristina Coltro

Manager, Demonstration Projects
Con Edison
Coltroc@coned.com



PG&E Marketplace

// HIGHLIGHTS

200,000

CUSTOMERS

visit the PG&E Marketplace each year.

Marketplace may deliver energy savings as low as

\$0.05 & \$0.13

per

KILOWATT-HOUR.

After visiting the Marketplace,

46%

of visitors reported a

MORE FAVORABLE

view of PG&E.

In 2015, Pacific Gas & Electric Company (PG&E) launched the PG&E Marketplace, an online platform that helps customers save energy by informing and assisting them with their energy research and presenting the relative efficiency score and total lifetime cost for products of interest. Designed and implemented by Enervee, the Marketplace provides customers with recommendations on energy-efficient equipment across 19 product categories, including specifications, ratings, availability of rebates, pricing and price alerts, and local store availability. PG&E does not sell energy-efficient products or process rebates directly through its Marketplace.

Throughout PG&E's 40-year history of offering energy efficiency programs, many stakeholders have come to expect PG&E to provide a cash rebate to customers for the purchase of energy-efficient goods and equipment. Today, the rebate model presents a specific challenge for the residential sector due to the proliferation of plug load devices (sound bars, computers, tablets, etc.) that make up about 25 percent of residential electricity use, with small savings per unit and price parity between efficient and inefficient models.

In response, PG&E launched the Marketplace to function as a cost-effective education tool to influence customer

purchase decisions. To date, nearly 10 percent of PG&E's residential customers have visited the marketplace site; 64 percent of site users were satisfied with the marketplace. Additionally, 46 percent reported having a more favorable view of PG&E after using it. Nearly half of respondents also indicated that the Marketplace influenced their purchase decision, appreciating features like the Enervee Score®, which ranks products by energy use, and the Clear Cost tool that estimates lifetime operating costs and possible savings.

An independent assessment estimated a notable amount of energy savings potential with the deployment of the Marketplace, approximately 15,304 to 41,901 megawatt-hours of gross electricity savings at a cost ranging from \$0.05 to \$0.13 per kilowatt-hour during its three-year trial period from 2015 to 2017. PG&E is working on formalizing the evaluation methodology and officially claiming savings for 2019.

The key to maximizing energy savings potential from the Marketplace is increasing the traffic to the site. Going forward, PG&E plans to apply an array of marketing strategies to drive traffic to the site. //

// CONTACT

Eva Chu

Manager, Residential and
Partnership Programs
PG&E
eva.chu@pge.com



Energy Marketplace

// HIGHLIGHTS

In five months, PSE&G customers purchased more than

35,000

**REBATED
SMART THERMOSTATS.**

PSE&G's Marketplace attracted more than

120,000

UNIQUE VISITORS

since its launch in
February 2018.

Public Service Electric and Gas (PSE&G) launched an online marketplace focused on smart thermostats in July 2018 for customers in its service territory in New Jersey. PSE&G's goal was to drive adoption of smart thermostats via rebates through its online marketplace to achieve energy savings. Customers also could pay for and schedule installation at the time of the purchase. Since its launch, the site has attracted roughly 120,000 unique visitors driven by website banners, email marketing, word of mouth, and social media.

The program was slated to run for two years through July 2020, but it ended in December 2018 because PSE&G customers purchased more than 35,000 rebated

smart thermostats (up to a \$150 rebate per thermostat), exhausting the program budget of \$5.5 million.

PSE&G's October 2018 "Clean Energy Future" filing with the New Jersey Board of Public Utilities requested an expanded online energy marketplace that includes \$280 million for rebates for energy products and the ability to offer energy efficiency services through the marketplace. //

// CONTACT

Frank Vetri

Program Support Manager

PSE&G

Frank.Vetri@pseg.com



SDG&E Marketplace

// HIGHLIGHTS

SDG&E's
Marketplace received
1 Million+
SITE VISITS
since launch.

Customers saved
\$1 Million
on
ENERGY-EFFICIENT
products.

SDG&E donates
\$10
TO CHARITY
for every rebate
processed.

In 2016, San Diego Gas & Electric (SDG&E) launched a new online customer engagement portal, becoming one of the first electric companies in the country to establish an online energy Marketplace—a one-stop shop for energy-efficient appliances and products.

Through the Marketplace, SDG&E customers can search for, filter, and compare more than 7,000 energy-efficient products across 22 product categories available via online retailers and brick and mortar stores. At the end of 2017, SDG&E's Marketplace recorded more than one million site visits since launch, with around 60 percent of visitors returning to the site. SDG&E

anticipates reaching two million site visits by the end of 2019.

SDG&E offers rebates on the Marketplace ranging from \$25 to \$250 for select energy-efficient products. With more than 18,000 rebates processed, SDG&E customers cumulatively have saved more than \$1 million. While the initial focus of the Marketplace was on rebate-eligible products, SDG&E's overarching goal is to help customers make energy-wise purchases. Over the years, SDG&E has added several non-rebate-eligible, but extremely popular, consumer electronics such as computer tablets, video game consoles, and air purifiers.

More than 25,000 customers have created personal profiles on the Marketplace, allowing them to receive automated email alerts about price drops, and new products on market through saved search results, and to track status of their rebate.

To help drive customers to the Marketplace, SDG&E has used targeted emails and social media to promote partner retailer sales events, advertised at San Diego Padres games, and used themed sweepstakes (i.e., Summer 2017 Solar Eclipse) where customers can win free devices like smart thermostats or digital assistants by creating a profile, “favoriting” products, and inviting friends to enter the sweepstakes. SDG&E also donates \$10 in the customer’s name to one of three charities every time a customer rebate is processed.

SDG&E’s Marketplace team constantly is striving to remove customer pain points in the rebate process and launched FastTrack rebate processing in 2017 which allows customers to take a photo of their receipt and upload it to the Marketplace site. FastTrack settles 40 percent of rebates on the same day, and more than 75 percent within a week of the request being uploaded to the Marketplace. //

// CONTACT

Ramakrishna Dhanekula

Product Manager - Marketplace

SDG&E

RDhanekula@semprautilities.com



The Xcel Energy Store

// HIGHLIGHTS

IN THE FIRST 6 MONTHS, THE XCEL ENERGY STORE

Had
200,000
unique visitors.

Sold about
\$1 Million
in products.

Enrolled
4 MW
of demand response.

The Xcel Energy Store (the Store) is available to all residential customers across all eight states in which Xcel Energy operates. The Energy Store provides customers centralized access to a variety of efficiency products and programs.

Roughly 200,000 unique customers have visited the Xcel Energy Store, which launched in mid-2017, and have purchased more than \$1 million in products over the initial six-month post-deployment period. The Store also was the primary channel for new thermostat-enabled demand response program enrollment during this period, adding about 4 megawatts (MW) of controllable load. For Xcel Energy, the Store

is a customer engagement tool that improves customer satisfaction.

The Xcel Energy Store offers a variety of products, some with rebates and others without, such as smart thermostats, LED lighting, smart power strips, efficient shower heads, smart door locks, security systems, and more. The instant rebate is the secret sauce to energy-efficient product sales. Customers quickly and easily can see product cost after rebate savings, verify rebate eligibility, and redeem the rebate for instant savings. The intelligence that powers the online instant rebates also allows Xcel Energy to offer instant rebates at Lowe's and Home Depot retail locations that customers

can redeem via a unique QR code on their smartphone.

In Colorado and Minnesota, Xcel Energy also offers energy services through the Store, such as the Home Energy Squad. For \$75, customers can schedule the direct installation of LEDs, a programmable thermostat, weather stripping on one external door, an efficient shower head, kitchen and bathroom faucet aerators, and water heater insulation.

As part of an enterprise effort to enhance and simplify the customer experience, Xcel Energy leveraged what it learned through the Store to help customers compare Xcel Energy's nine different renewable energy offerings and to select the program that best fits their needs.

Xcel Energy also is planning to integrate an EV Advisor service for electric vehicle purchases and home charging option comparisons, charger installation services, and managed charging program enrollment. //

// CONTACT

Tim Laughlin

Product Portfolio Manager

Xcel Energy

Timothy.M.Laughlin@xcelenergy.com



// LOW- TO MODERATE-INCOME CUSTOMER SOLUTIONS

Programs focused on low- to moderate-income customers are not new to electric companies. However, electric companies today are using technology, data analytics, web portals, and partnerships to personalize service and to provide solutions to customers who would most benefit from lower energy bills. The case studies in this chapter demonstrate how personalization and partnering are helping low- to moderate-income customers pay bills, enroll in income-eligible programs, find options for saving energy and money, and link up with energy assistance agencies.

// **BENEFITS INCLUDE**

- Creating a more personalized experience for customers by providing easy access to programs and services that meet their needs;
- Ensuring that all customers, regardless of income, can take advantage of energy efficiency programs and save money;
- Helping customers better manage their monthly energy budgets;
- Making the federal financial assistance or other funding available to pay energy bills easier to access;
- Connecting agencies with customer information (at customer's consent) to ease the bill pay process for eligible customers. //





Smart Savers Pilot

// HIGHLIGHTS

5,400
SMART THERMOSTATS
were provided free
of charge to low- and
moderate-income
customers.

The Smart Savers
pilot boosted energy-
efficiency engagement
and supplier diversity in
**UNDERSERVED
AREAS.**

Customer annual
energy savings:
2.5M
KILOWATT-HOURS,
roughly equivalent
to the annual energy
usage of 380 homes.

Too often, those who would most benefit from lower energy bills are least able to afford energy-efficient upgrades.

Launched in 2018, Smart Savers brings the latest smart thermostat technology directly to low- and moderate-income customers—at no cost. Approximately 5,400 income-eligible customers in the pilot communities of Champaign, Decatur, East St. Louis, and Peoria were given a Nest E or ecobee3 lite thermostat by Ameren Illinois. Collectively, their new smart thermostats are expected to save an estimated 2.5 million kilowatt-hours of electricity and 270,000 therms every year. This is equivalent to approximately \$250,000 in electric savings and more than \$270,000 in

natural gas savings annually.

To further boost local economies, the pilot program relied extensively on local or diverse-owned suppliers to help identify program participants and to install thermostats. This commitment made a huge impact for small business owners like one local, diverse company, which completed \$50,000 in installation work in Illinois' Metro East area in a five-month period.

"One of my goals has been to ensure that all customers, regardless of income, have an opportunity to receive real and meaningful savings from the energy efficiency programs they have been paying for." - Richard Mark, Ameren Illinois President

Thanks in part to Smart Savers, the Ameren Illinois Energy Efficiency Program doubled the number of diverse vendors it worked with in 2018 and increased its diverse spend by seven-fold. //

// **CONTACT**

Shelita Wellmaker

Manager, Energy Efficiency
Ameren Illinois
swellmaker@ameren.com

EVERSOURCE

New Start Program

// HIGHLIGHTS

For every on-time payment made through New Start,

1/12

of a customer's arrearage is **FORGIVEN**.

There are approximately

21,000

MASSACHUSETTS CUSTOMERS

enrolled in New Start at any time.

In March 2019, Eversource launched a self-serve

ONLINE PORTAL

for customers enrolling in New Start.

The Eversource **New Start** program is a bill arrearage payment and forgiveness program for low-income residential customers who are working to pay off their energy debts. Based on the customer account billing history, Eversource establishes a monthly budget payment (i.e., New Start Payment) amount to cover the regular monthly bill and to pay a portion of the past due balance. Customers who make New Start payments in full and on-time for 12 consecutive months will have the remainder of their debt forgiven, and their electricity is further protected from being disconnected. On average, there are approximately 21,000

customers participating in Massachusetts at any given time.

The New Start program is available to customers who are eligible to receive energy assistance funds or can provide other proof of income. To qualify, customers must have income that falls at or below 60 percent of the estimated state median income; have a current account balance of \$300 or more; and be at least 60 days overdue. Massachusetts customers already enrolled in the MA Residential Discount Rate program are automatically eligible for New Start.

Until recently, enrollment was done through Eversource customer service agents

or through local Community Action Agencies. In March 2019, Eversource introduced a self-serve online portal, which allows customers or Community Action Agencies working with limited income customers to apply for, check eligibility, and enroll in the program. This allows customers to help themselves while also eliminating the need to discuss financial difficulties with live agents. The new technology helps the program run more efficiently, allowing customers to make payment plans and pay their bills online. Though most customers still go through the call center to get help with their bills, customer service agents are able to direct customers to the new portal, which the company believes will help reduce the need for additional calls as well as Community Action Agency foot traffic.

Another key benefit of the New Start program is that it teaches financially challenged customers good payment habits. In Massachusetts, limited income or “hardship” customers are protected from service disconnection for non-payment during the “moratorium” period between November 15th and April 1st. The New Start budget payment helps these customers better manage their monthly bills since customers know ahead of time the cost of their electric bills on the program and the benefit they will receive (a reduction in their arrears) by paying them timely. All customers benefit when participants improve payment behavior and avoid accumulating arrears that could become a shared uncollectible expense. Eversource is looking for other opportunities in its service territory where the New Start program could be of benefit to limited income customers struggling to pay their bills.

In addition to the New Start program, Eversource also offers low-income residential customers other ways to save on their energy bills. Eversource offers a MA Residential Discount Rate, which currently provides a 36-percent discount off the total bill amount. The Low Income Energy Efficiency program is implemented in conjunction with federal assistance programs and provides customers with energy efficiency upgrades at no cost, including home energy assessments, energy-efficient appliance replacements, insulation upgrades and heating system replacements.

Eversource has had close to 66,000 low-income participants in Low Income Electric and Gas Energy Efficiency programs and services over the last three-year period from 2016 through 2018, which equates to approximately 69,000 annual kilowatt-hours (kWh) and 562,000 lifetime kWh electric savings and 1,124,000 annual therms and 22,879,000 lifetime therms of natural gas savings. //

// CONTACTS

Cheryl Harrington

Senior Program Manager,
Residential Energy Efficiency
Eversource Energy
cheryl.harrington@eversource.com

Karen Palmieri

Manager, Customer Group
Policy and Planning
Eversource Energy
karen.palmieri@eversource.com



ASSIST Web Portal and Power to Save Program

// HIGHLIGHTS

The ASSIST web portal received a

95%

SATISFACTION
rating from Energy Assistance Agencies.

The ASSIST web portal reduced
AGENCY CALLS
to FPL by

73%

In 2018, FPL retrofitted about

2,300

HOMES
in low-income areas.

Florida Power and Light Company (FPL) has a number of programs designed to provide low-income customers with financial assistance. Recently the company enhanced two of its programs to increase customer participation and ease of use.

- For its **ASSIST program**—a partnership of nonprofit agencies and social service organizations that operates in FPL's service territory—FPL redesigned its web portal in 2017 to improve accessibility and participation.
- Additionally, FPL has proactively reached out to eligible customers to increase awareness of its residential low-income **Power to Save Program**,

where participation has increased dramatically since 2015.

ASSIST Program

Through its ASSIST Program, FPL refers residential low-income customers to local Energy Assistance Agencies that help provide federal financial assistance or other funding. Customers give agencies consent to access their FPL customer account information through a secure online web portal, making the process of providing assistance easier. Agencies can enter and modify ASSIST bill payment commitments, and access information that helps them expedite bill payment assistance processing.

This has facilitated greater self-service for the customer and agencies, reducing the number of contacts to FPL by approximately 73 percent and helped achieve a 95 percent satisfaction rating from agencies.

Power to Save Program

In 2016, FPL launched its Power to Save program to offer assistance to low-income customers through energy retrofits administered by FPL in selected neighborhoods. As part of the energy retrofits, FPL offers services including a home energy survey, air conditioning (A/C) maintenance and limited duct system repair, and a rebate for weatherization and A/C maintenance. Customer participation more than doubled since the program's launch. //

// CONTACT

Brad Goar

Senior Business Specialist
Florida Power & Light Company
Bradford.Goar@FPL.com

Steve Whitworth

Senior Process Specialist
Florida Power & Light Company
Steve.Whitworth@FPL.com



Call Center Personalization for Low- to Moderate-Income Customers

// HIGHLIGHTS

In 2018, the pilot enrolled nearly

10,000

**INCOME-ELIGIBLE
CUSTOMERS**

in energy efficiency programs.

As a result of the pilot, enrollment in targeted energy efficiency and income-eligible programs

INCREASED BY

38%.

In February 2018, National Grid launched a contact center personalization and customer experience improvement pilot targeted at low- to moderate-income (LMI) customers. National Grid noticed that a disproportionate number of call center inquiries were coming from LMI customers, that many of these customers were having trouble paying their energy bills, and that customer service representatives (CSRs) could not identify easily the various programs and solutions for which these customers qualified. The pilot began with the question: *How can we improve our relationship with our LMI customers and better understand their needs?*

Working with technology partner Energy Savvy, National Grid developed and implemented an analytics-based platform that cross-references customer account information with a catalogue of eight energy efficiency products and services. The platform, created in less than a year, delivers an interactive CSR portal, presenting actionable steps to help guide conversations and to find the best and next-best options for saving customers energy and money, personalized to each customer. In parallel, National Grid also launched a targeted email campaign to help customers proactively, before the need to call the contact center arose.

This pilot is available to all “income-qualified” (e.g., LIHEAP or state-qualified assistance) electric customers in National Grid’s Massachusetts service territory and to income-qualified electric and natural gas customers in its Rhode Island territory. In the eight months since its launch, this pilot has enrolled nearly 10,000 customers across the catalogue of eight programs, resulting in an 11-percent decrease in contact center calls and a 38-percent average increase in enrollment across the catalogue of programs.

A key National Grid metric for success is that of “trust and ease.” Among recently surveyed customers who received contact center service through the enhanced CSR portal, initial analysis shows that “trust” was scored 15 percentage points higher versus those who did not. The customer engagement portal is scalable across many different programs and services and easily integrates into existing customer relationship management software.

National Grid plans to expand the CSR portal to all contact centers serving Massachusetts and Rhode Island customers, followed by all New York contact centers. The company also will expand the catalogue of program and service options available through the portal, such as e-pay enrollment, more energy efficiency programs, and support for third-party direct marketing programs (e.g., home energy assessment and equipment installation), and will explore more communication channels. //

// CONTACTS

Courtney Acker

Product Owner, Customer
Improvement Programs
National Grid
Courney.Acker@Nationalgrid.com

Nancy Concemi

Director, Customer Improvement
Program
National Grid
Nancy.Concemi@nationalgrid.com



Multifamily Owner Services

// HIGHLIGHTS

PG&E's Multifamily Owner Services links energy-related funding from

12

STATE AND REGIONAL programs.

60%

of PG&E's low- to moderate-income customers live in **MULTI-FAMILY BUILDINGS.**

Applications

INCREASED BY

10%

due to the Multifamily Owner Services.

Nearly 60 percent of the low- and moderate-income customers that Pacific Gas & Electric (PG&E) serves reside in multifamily buildings and are a high-priority sector for stakeholders. However, multifamily dwellings are among the hardest segments to reach in providing comprehensive energy solutions to residents.

In late 2017, PG&E partnered with TRC Advanced Energy Services (TRC) and launched the no-cost Multifamily Owner Services to provide multifamily property owners, building managers, and other industry professionals with a centralized resource for energy-related funding opportunities. Multifamily Owner Services' analytics-driven intake process helps

property owners and managers develop site-specific goals and needs, receive information on the various multifamily programs operated within PG&E's territory, and gather feedback about these resources.

PG&E's Multifamily Owner Services initiative is designed to guide property owners and building managers to leverage multiple programs to create a comprehensive efficiency project. The Multifamily Owner Services engages directly with 12 state and regional energy resource, income-qualified, and data programs to provide customers a more streamlined engagement process for:

- Energy efficiency rebate and incentive programs;

- Distributed energy resource programs;
- Financing programs;
- Tax credit programs;
- Income-eligible (free and low-cost) programs targeting low- to moderate-income residents.

PG&E has found that the Multifamily Owner Services enables efficient data capture on a variety of program activities, enhances multiple program offerings, and streamlines reporting requirements. Through it, PG&E and its partners use data analytics to target buildings more effectively based on energy opportunity and building and tenant attributes. The Multifamily Owner Services initiative has boosted customer engagement across PG&E's program portfolio and has increased market awareness about programs in PG&E's service territory. //

// **CONTACT**

Eva Chu

Manager, Residential and
Partnership Programs
PG&E
eva.chu@pge.com



Predictive Analytics in SCE's CARE Program

// HIGHLIGHTS

SCE serves
1.2M
CARE HOUSEHOLDS,
a third of its
customer base.

In 2017, SCE enrolled
more than
250,000
NEW PARTICIPANTS
to CARE.

Predictive analytics has
improved SCE's ability to
ENROLL AND VERIFY
CARE customers.

Under the California Alternate Rates for Energy (CARE) program, income-qualified customers are eligible for discounted rates from their electric companies. It is a self-declared eligibility program that requires no up-front documentation. Southern California Edison (SCE) serves 1.2 million CARE households, making up approximately a third of its customer base, and provides about \$375 million in bill discounts annually. Those enrolled in CARE receive a discount of approximately 30 percent per monthly bill.

To better manage enrollment, verification, and communication with these customers, SCE has utilized predictive

analytics to identify customers most likely to be approved for CARE rates, and to service areas where more of these customers reside. Using predictive analytics, SCE is able to identify:

- Who is most likely to apply and qualify (Enrollment);
- Who is most likely not to qualify (Verification);
- When customers are most likely to de-enroll (Survival); and
- How customers prefer to engage (Digital vs Non-Digital).

Fact-based analysis helps SCE understand the conditions of its income-qualified

customer base and make informed decisions around CARE and other income-qualified programs to ensure limited resources are maximized in an equitable and effective manner.

SCE uses various methods to increase CARE program enrollment, including email and direct mail campaigns. In 2017, SCE enrolled over 250,000 new participants in the CARE program. Starting in 2017, the CARE team began to integrate and test the effectiveness of predictive analytics on targeted direct mail response rates and program enrollment. SCE found that predictive analytics increased the customer response from 3.08 percent to 3.48 percent, and increased the approved applicant rate from 79.43 percent to 82.08 percent.

With each campaign, SCE targets specific customers with specific messaging, including:

- Seasonal marketing to the hottest or coldest climate zones.
- Advanced awareness of Time of Use impacts to low-income customers.
- Increased assistance for larger family homes.
- Disaster relief protections for low-income customers in wildfire areas.

SCE verifies approximately seven percent of all CARE customers annually. To verify eligibility, SCE requires high-usage CARE customers (those households that exceed 400 percent of baseline energy usage in any billing period) to provide income eligibility documentation. Nine out of 10 do not respond with income documentation and automatically are de-enrolled. To maintain the integrity of the CARE program, SCE

uses a Disproportionate Stratified Random Sampling approach to randomly select non-high-usage customers for verification. This sampling design oversamples customers known to significantly fail eligibility verification, disproportionately sampling those who reside in “high-income” Zip codes. In 2017, more than 36,000 high-usage customers and 29,000 non-high-usage customers were deemed no longer eligible and were removed from the CARE rate.

Survival analysis aims to identify patterns of customer attrition from the programs and reveals that many of SCE’s customers typically only stay enrolled with CARE for two years. After this two-year benchmark, customers either are recertified or released from the program. Those who survive the two-year benchmark are likely to remain long-term CARE recipients.

Going forward, SCE plans to survey CARE customers to assess their satisfaction with the program and ease of completing the recertification form to see if there is a customer experience issue that can be remedied. //

// CONTACT

Anthony Abeyta

Advisor, Income Qualified
Program Administration
Southern California Edison
Anthony.Abeyta@sce.com



Agency Portal

// HIGHLIGHTS

There are 40 agencies that are using TECO's new portal, assisting approximately

14,500

LOW-INCOME CUSTOMERS.

Payment commitments are

POSTED IMMEDIATELY, avoiding unnecessary disconnects and reconnects.

The TECO Agency Portal **REDUCED CALLS BY**

70%.

In TECO Energy's (TECO's) service area, there are approximately 221,000 low-income residential customers eligible for bill payment assistance from more than 300 federal and social service agencies. These agencies were challenged with getting assistance to these customers not because of funding, but because of manual processes that bogged down the local agencies and TECO. In January 2018, TECO launched a new, company-run portal to connect agencies with customer information and automated processes to ease the process to pay eligible customer bills.

With the introduction of TECO's company-run portal in January 2018, there was an

immediate 70 percent reduction of calls made by participating agencies to TECO. The previous process required the agency case worker to call TECO and report that a commitment had been faxed. TECO then had to manually process the faxes and communicate back to the agency. This multi-step process resulted in assistance delays for the customer, as well as reconnection delays and long hold times to reach a live agent on TECO's dedicated agency phone line. The new portal has changed all of that.

As of April 2019, about 40 agencies have signed on to the portal and this number continues to grow. This is a 300 percent increase from the agency participants in the

previous portal, which was limited by high licensing and participation fees. As a result, TECO has already seen a 10 percent increase in customers getting utility bill assistance, which will also continue to grow as more agencies are trained and use the portal.

The new portal operates in a secure environment that protects customer information, while also simplifying agency access and usability. Once a customer provides consent, agency users can access customer payment history, monthly bills and late fees, and the agency commitment history, providing customers immediate assistance and assurance—days of waiting for information and long hold times are gone. With a detailed view of the customer bill, agencies quickly can identify bill components with grant funding restrictions, leading to more efficient use of limited grant funding. Moreover, agency payment commitments made on TECO's portal are effective immediately, eliminating the need to place follow-up phone calls. This commitment also places an immediate hold on the disconnection process and automatically triggers the reconnection process for customers who had service interrupted.

The new portal also allows agencies to run commitment reports, which detail all the commitments an agency creates in a given time period, and activity reports that display all actions performed by an agency or caseworker. The portal also helps the agency develop a better understanding of whether the customer needs assistance on a reoccurring, seasonal, or one-time basis.

Agencies have shared that TECO's portal is fast, easy, user-friendly, and convenient for their business schedule.

Going forward, TECO plans to continue recruiting agencies throughout its territory to

register with the new portal, targeting agencies with the largest customer base first. The goal is to simplify and streamline the electric bill payment assistance process for all of TECO's low-income residential customers and to maximize eligible funding. //

// CONTACT

Gerri Drummond

Social Services/Credit &
Collections Coordinator
Tampa Electric & Peoples Gas
gmdrummond@tecoenergy.com



// CUSTOMER NOTIFICATION AND ENGAGEMENT

As customers' preferences and expectations change, electric companies are keeping up by investing in people, process, and technology to transform and improve on how they communicate and engage with customers during moments that matter—receiving the monthly bill, experiencing an outage, starting/stopping service, or signing up for a new rate plan or renewable energy option.

The case studies in this chapter illustrate how EEI member companies are improving customer satisfaction by personalizing service based on deeper knowledge of customer preferences; investing in customer service representatives and enhancing call center processes for a more consistent and improved customer experience; offering online customer care and self-serve options to minimize customer effort; providing notifications of projected electric bills; and, improving the customer outage experience with proactive communications and timely updates.

// BENEFITS INCLUDE

- Creating a more personalized experience for customers by providing easy access to energy use and billing information through the customer channel of choice;
- Helping customers by switching them to the rate plans that make the most sense for them;
- Assisting customers in finding the right contractor for their energy project;
- Customizing the customer call center and online experience, which results in faster problem resolution;
- Providing customers with proactive outage alerts and timely outage restoration information, which increases customer satisfaction. //





Mass Customer Migration to New Rate Plans

// HIGHLIGHTS

A 6-month education and outreach campaign supported successful customer enrollment in

5

NEW RATE PLANS.

Demand-based rates encourage

CLEAN ENERGY

use.

20%

of APS customer are on a
DEMAND-BASED
plan.

In spring 2018, Arizona Public Service (APS) migrated all eligible residential customers (approximately 1 million) to five new rate plans. These new rate plans emphasize a trend toward encouraging more energy-efficient electric consumption, supporting alignment of demand with solar energy generation, and providing savings opportunities to customers that shift usage from on-peak to off-peak and stagger the use of major appliances.

As part of the rate migration process, APS engaged in extensive education and outreach efforts over a six-month period and launched new energy management programs to ensure customers have the information and the tools

necessary to understand the new rates and to be on the right service plan to fit their needs. If a customer did not select a plan by the deadline, APS automatically migrated them to a plan most similar to their previous plan.

- The Lite Choice and Premier Choice plans follow traditional two-part rate design where there is a basic service charge and a flat energy charge and are designed for customers with low to moderate monthly energy use of below 600 kilowatt-hours (kWh) and 600-1,000 kWh respectively. Fifteen percent of APS customers are on these plans.
- The Savers Choice plans features a

basic service charge and a time-of-use (TOU) energy rate with peak hours of 3 to 8 p.m. during the summer, a change from noon to 7 p.m. for peak hours on the prior plans. Sixty-five percent of APS customers are on this plan.

- The Savers Choice Plus and Savers Choice Max plans include a basic service charge, and a TOU energy rate, and introduce customers to peak usage (demand) charges. About 20 percent of APS customers selected a Savers Choice Plus or Max rate plan.

APS's new rate plans, in particular the demand-based plans, help to ensure clean energy plays a larger role in meeting customer energy needs. Today, APS delivers electricity that is 50-percent carbon-free. Looking ahead, APS plans to continue to invest in resources and technology and to structure rate plans that incentivize customers to make energy-wise decisions. //

// CONTACT

Sharon Connolly

Manager, Customer Experience
Arizona Public Service Company
sharon.connolly@aps.com



Power Alert Service

// HIGHLIGHTS

More than
1.4M
customers in the Houston
area are enrolled in
**POWER ALERT
SERVICE.**

CenterPoint has sent
15M+
ALERTS
to enrolled customers.

Power Alert Service
has a
92%
APPROVAL RATING.

More than 1.4 million CenterPoint Energy (CNP) customers in the greater Houston area enjoy Power Alert Service® (PAS)—a free notification and engagement tool that gives personalized alerts by a customer’s chosen channel (phone, email, and/or text)—when power goes out at their home or business and keeps customers informed throughout the outage restoration process. Since 2014, CNP has sent more than 15 million PAS alerts to customers.

Using data collected through smart meters to pinpoint addresses affected by power outages, PAS notifies customers within minutes of a confirmed outage. The initial notification includes the number of customers affected and an estimated time of

restoration (ETR). PAS also enables customers to select up to 15 contacts—spouse/partner, children, relatives, babysitter, etc.—to keep apprised of the situation.

Customers get updates advising about the status of repair crews, and on-site repair crews can revise the ETR, which triggers a follow-up alert with the new ETR. The final message includes the outage cause.

PAS also alerts large numbers of customers before, during, and after major storms. For example, during Hurricane Harvey in 2017, CNP sent 352,629 text, email and phone alerts to customers, targeted by service center area (of which there are 12) with information like number of affected customers, outage duration and ETR. The

"It's accountable, responsive, and transparent: ART! Updates are provided at every step, from power issue reported to assessed to resolved." - CNP Customer

messages linked to the web or Facebook for detailed updates for their community.

In emergencies, PAS also can be used to segment, identify, and text non-enrolled customers outage information.

PAS is so effective that only about five percent of enrolled customers call to report their outage, compared to 25 percent of those not enrolled who typically call to report an outage. Surveys of PAS enrollees consistently show customer satisfaction around 92 percent.

In the future, CNP will leverage smart meters to enroll more customers in (including commercial and industrial) PAS. //

// CONTACT

Steve Waters

Digital Communications Supervisor

CenterPoint Energy

stephen.waters@centerpointenergy.com



An Exelon Company

Green Power Connection Toolkit

// HIGHLIGHTS

The Toolkit's
SOLAR CALCULATOR
leverages customer
usage history, rate, and
private solar exposure.

Nearly
14,000
customers have
accessed the
**GREEN POWER
TOOLKIT.**

More than
6,000
customers have created a
**SOLAR CALCULATOR
REPORT.**

ComEd launched a new Green Power Connection Toolkit in December 2018, with a suite of tools for customers and solar contractors. Part of ComEd's larger effort to deliver a transparent, seamless, and personalized customer service journey for solar customers and contractors, the Toolkit is designed to help facilitate the growth of the solar market in Illinois following the passage of the Future Energy Jobs Act in late 2016.

Within the Toolkit, customers have access to a solar calculator that leverages their usage history, rate, and private (rooftop) solar exposure to help customers understand what solar could mean for them. The Toolkit

also provides an interconnection tracker that ensures contractors and the customers they are working on behalf of have a common view of application status. After connecting their solar, customers have access to a solar dashboard that helps them monitor and optimize the value their solar is providing to them.

To date, nearly 14,000 customers and 4,000 contractors have accessed the Toolkit, and more than 6,000 customers have created a solar calculator report—with usage set to grow through the pending launch of a marketing campaign.

Moving forward, ComEd will be adding a community solar portal to the Toolkit.

This new feature will allow solar developers to provide ComEd with subscriber and generation allocation information for their community solar projects, so ComEd can reflect community solar credits on customers' bills automatically.

ComEd's solar toolkit is part of a phased rollout across Exelon Utilities, with deployment planned at ACE, BGE, Delmarva Power, and Pepco in 2019. //

// CONTACT

Erica J. Borggren

VP, Customer Solutions

ComEd, an Exelon Company

Erica.Borggren@ComEd.com



Find It Duke Referral Network

// HIGHLIGHTS

The Find it Duke referral service costs

\$0

FOR CUSTOMERS.

Find it Duke made

25,000

referrals in 2018—

DOUBLE

its performance in 2017.

Only

8%

of contractor applicants

QUALIFY

to be invited to Find it Duke.

Duke Energy's Find it Duke referral network helps customers get connected to a pre-screened list of industry-certified home repair professionals, reducing the frustration and excess time it takes to find reliable professionals. Through Find it Duke, customers looking to improve their HVAC systems, insulation, plumbing, or other electrical systems will receive one or more referrals to pre-screened, industry-certified home repair contractors at no cost to the customer.

Since launching in 2017, the program has grown substantially. In 2018, Duke made more than 25,000 referrals—double the amount made to customers in 2017. In

the first quarter of 2019, Duke already was running 15 percent ahead of 2018. The service is offered to residential customers in Indiana, Kentucky, North Carolina, Ohio, and South Carolina.

The professional contractors featured on the Find it Duke website are ranked quarterly using a performance-based metric system. Applicants must undergo a strict vetting process to determine eligibility for the network, including background checks and performance reviews measuring quality of work. Contractors must be insured and provide workers' compensation to their employees. Due to the high standards expected during this application process,

only 8 percent of Duke's contractor pool qualify for the referral service. This protects both customers and the Duke Energy brand from negative customer experiences.

Duke routinely inspects a contractor's work for quality assurance and code compliance. After a home project is completed, customers are given a five-question survey to rate their experiences. Any issues identified in the survey and any complaints to the call center are documented in the contractor's file. Contractors also can earn points for installing rebate-eligible energy-efficient products and for submitting completed EE rebate application forms on behalf of the customer. Duke customers are eligible to apply for up to \$1,525 in rebates to help offset the cost of incorporating energy-efficient systems and appliances into their homes.

Contractors with the highest ratings are listed prominently on the Find it Duke website. Contractors pay, on average, a 5-percent referral fee to Duke based on the contract value. Funds from the contractor fees are used to offset program costs.

The Find it Duke website—accessible by desktop or mobile device—and call center is supported by Black Hawk Engagement Solutions. Customers also can access a project cost estimator and track their rebates through the website. Customers frequently request additional referral options beyond home repair and renovations, and the Duke product team always is evaluating options to expand services. //

// CONTACT

Bill Strickland

Senior Product Manager
Duke Energy Corporation
Billy.Strickland@duke-energy.com



Kilowatt Krush

// HIGHLIGHTS

Kilowatt Krush engages

K-12

STUDENTS

in energy efficiency in fun and informative ways.

There were more than

1,400

APP DOWNLOADS

made in the first month after launch.

Kilowatt Krush could increase

ENERGY-EFFICIENCY KIT

signups by

4%

In March 2019, Duke Energy launched **Kilowatt Krush**, a new gaming app created to help promote energy efficiency with a young audience—students in grades K-12—and to foster energy-saving behaviors at an early age. Through this app, Duke is learning how customers react to the entertainment value of a game and whether it works to increase energy conservation in homes.

Inspired by Duke’s live performance K12 program with the National Theatre for Children, Kilowatt Krush was created to engage youth interest in energy in a fun, informative way, and is used as a channel to promote a free energy efficiency (EE) kit

to parents. On average, 400,000 students participate in the K12 program, and 50,000 EE kits are distributed per year.

Kilowatt Krush was designed by Duke’s “Idea Lab” IT team and is made up of a series of nine mini-games that take place inside three houses and each have 3 levels of difficulty. Users play games that test knowledge around energy and earn coins, allowing them to change the look and feel of their virtual house and to upgrade to new houses. As required by the Children’s Online Privacy Protection Act (COPPA), students who download the app are asked to provide a parent’s email address to receive a code to permit access to the games. The parents also

receive an offer for a free EE kit.

To garner more attention for the app, Duke set up a friendly competition between participating schools. With the results shared online, each school attempts to obtain the highest scores on Kilowatt Krush. The score is based on the number of coins collected, houses unlocked, number of downloads, and time played on the app. This competition serves to encourage more students to download the app, which, in turn, promotes greater request for EE kits.

Duke estimates that Kilowatt Krush could increase EE kit requests by 4 percent; in the 2018-19 school year, Duke launched the Energy Kit Challenge with participating schools, establishing a goal to save 10 million kilowatt-hours of electricity. Currently, schools now distribute a marketing piece for the app to every student who sees a performance. Starting in the 2019-2020 school year, Kilowatt Krush will be incorporated into the performances and all applicable program materials.

Initial results are promising. With minimal advertising to promote the game before launch, there were more than 1,400 downloads completed in the first 30 days and 300 app codes validated. If long-term results indicate that this new entertainment channel delivers more value to customers than traditional engagement programs, the game may be expanded to other residential products. //

// CONTACT

Amy Sadler

Product and Services Manager–
Residential Energy Efficiency
Duke Energy Corporation
Amy.Sadler@duke-energy.com



Call Center Analytics and Intelligent Routing

// HIGHLIGHTS

FPL's
**REPEAT CALLER
PROGRAM**
customizes engagement
with repeat callers.

Through the
SPEECH ANALYTICS
platform, dissatisfied
customers receive
proactive calls and
tailored care from
customer service
representatives.

Nearly
30%
of customer calls are
managed by the
**PROACTIVE INTENT
FEATURE.**

Florida Power and Light Company (FPL) has improved call center customer care by upgrading its speech analytics, intelligent routing, and proactive interactive voice response (IVR) features. These features were designed to minimize customer effort and enhance the caller's experience by applying data analytics to identify certain behaviors through live or automated customer service calls, depending on the customer's need.

FPL's **Repeat Caller** program leverages data from customer contact records and algorithms to identify opportunities for intelligent routing. For example, a customer who had spoken to a manager earlier in the

day would receive customized treatment if he or she calls in later that same day. The algorithm is managed by a priority hierarchy that is controlled by the level of importance of a call's subject matter. FPL has found that when a customer receives customized treatment on repeat calls, this leads to reduced customer effort and a 50 percent reduction in workload on subsequent elevated calls. The Repeat Caller technology also allows FPL to share targeted messages across contact centers and minimize transfers.

Leveraging Verint's **Speech Analytics** platform, FPL has developed a category framework to prioritize the most at-risk

customers identified by their level of dissatisfaction from prior recorded calls. Leads are automatically generated and delivered to an agent, along with contextual information on the customer's issue, for proactive customer outreach. The lead is available immediately in the Care Center dialer to improve an agent's call handling efficiency. This outreach to dissatisfied customers has improved brand advocacy, mitigated commission complaints, and reduced subsequent customer calls to the FPL's Care Center.

FPL also introduced a **Proactive Intent** process on the IVR feature, which allows the system to analyze various account attributes to identify the reason for a customer's call. Approximately 40 percent of calls are managed successfully by the Proactive Intent feature, which allows the IVR either to provide tailored messaging (e.g., confirming recent payment) or to offer direct access to an appropriate self-service feature for a customer calling in (e.g., payment is past due for current bill). This allows FPL to provide customers with a personalized experience, eliminates the need for customers to navigate a long menu, and increases the likelihood that the customer will use self-service options.

Going forward, to further enhance Customer Care Center call service, FPL will explore natural language processing on the IVR and voice assistants like Amazon Alexa and Google Home, and leverage robotics process automation. //

// CONTACTS

Raidel Alfonso

Manager, Customer Experience
Data Analytics
Florida Power & Light Company
Raidel.Alfonso@FPL.com

Robert Weber

Systems Analyst
Florida Power & Light Company
Robert.Weber@FPL.com



Online Customer Care Channel

// HIGHLIGHTS

Georgia Power's
Online Customer
Care website has
1.5M+
REGISTERED USERS.

The OCC website
supported
27.6M+
TRANSACTIONS
in 2018.

The OCC also supports
CUSTOMER
Billing Alerts, Usage
Alerts, and Outage Alerts.

Georgia Power completed the launch of its new Online Customer Care (OCC) website in 2017. The website is a self-service tool that enables customers to take a more independent approach to managing their home electricity usage. With this tool, customers are able to pay their bills, view their energy usage, set alerts, report outages, and make service requests. With nearly 1.5 million registered users, the website supported 50 million site visits and more than 27.6 million self-service transactions in 2018.

The goal of Georgia Power's digital space is to provide effective customer service through any channel while anticipating

customer needs and minimizing their effort. The OCC supports several customer-focused communication tools including Billing Alerts, My Power Usage Alerts, and Outage Alerts.

- **Billing Alerts** allow customers to manage how they receive information about their bill, including confirmation of bill payment, notifications about when their bill is ready to view, when the bill is due, and when the bill is past due. More than 220,000 customers are enrolled in Billing Alerts. The tool helps customers reduce missed due dates and disconnections through a

proactive notification system that also minimizes the need to call Georgia Power customer service for assistance.

- Through **My Power Usage Alerts**, more than 100,000 customers are able to monitor their electricity usage with daily and/or monthly email notifications. This personalized tool provides customers with tailored information about their energy usage and daily costs, eliminating surprise costs at the end of the month.
- More than 400,000 customers receive **Outage Alerts** sent by text, voice, and email notifying them of planned and unplanned power outages. Outage Alerts also serve as an essential part of Georgia Power's Outage Restoration Strategy. During a large storm, alerts are promoted through the company's corporate site, social media profiles, and through local news outlets, providing customers with updates during a power outage and their estimated restoration times.

In addition to the current set of notification tools powered by the OCC, Georgia Power plans to install a new chat channel—Chatbot—in the late 2nd quarter of 2019 that uses artificial intelligence to manage customer service interactions online. //

// CONTACT

Kimberly Bryant

Online Support Team Supervisor
Georgia Power Company
kcbryant@southernco.com



Proactive Outage Notification

// HIGHLIGHTS

Proactive communication

REDUCED

agent handled
outage calls by

36%.

Escalated calls
during outages

DECREASED BY

27%.

Nearly

1 Million

CUSTOMERS

receive proactive
outage notifications.

In early 2017, San Diego Gas & Electric (SDG&E) initiated a customer journey mapping effort around unplanned outages to improve the overall outage experience and internal operations. The main objectives were to minimize customer friction during outages, to provide timely and accurate information through the channels customers prefer, and to utilize technology and digital self-service channels to minimize manual effort and improve the customer experience.

With executive sponsorship, the Customer Experience team convened more than 20 stakeholders from across SDG&E, including Electric Operations, Customer Services, IT, and others to journey map the

entire outage experience. More than two dozen improvement opportunities were identified, prioritized, and approved by senior leadership. The highest priority was to improve the consistency, timeliness, content, and method of delivery for outage notifications.

The past practice was to issue outage notifications manually to SDG&E customers on an opt-in basis via email, and only to the customer of record. With only about 10,000 customers signed up for outage notification service, SDG&E recognized that approach could be improved.

Based on customer feedback, research insights, front-line employee interviews, best practices benchmarking, the journey

mapping results, and the Telephone Consumer Protection Act (TCPA)—which regulates telemarketing calls and text messages—SDG&E redesigned business processes and enhanced its outbound messaging technology to interact better with customers about outages.

A key change was a shift from an opt-in approach to an opt-out approach for outage notifications, whereby SDG&E automatically enrolled a pilot group of approximately 100,000 customers for outage notifications (a practice allowed under the TCPA).

During the pilot, SDG&E issued three types of messages—an initial notification, updates to its estimated restoration times (ERTs), and a notification upon restoration. SDG&E monitored metrics including call deflection, self-service rates, and time elapsed to issue the initial notification, as well as customer feedback via a post-outage survey. The results were very positive.

Inbound call volume during outages declined, opt-out rates were low, and escalated outage calls decreased by 27%. By proactively sending out notifications, SDG&E ensures customers now receive information on why an outage occurred and an estimated restoration time for when power will be restored. This positioned SDG&E as part of the solution rather than the problem.

In addition, SDG&E enhanced its communications options. In the event of an unplanned power outage, SDG&E now provides customers the option to receive proactive outage notifications through SMS text messages, automated calls, and emails when customer contact information is available. Customers also can add other recipients to receive outage notifications.

SDG&E also worked closely with its Outage Management System vendor Oracle Utilities to develop ‘if/then’ algorithms to separate momentary outages from sustained outages and expanded the types of outage cause descriptions to 17.

Currently, around 1 million SDG&E customers are enrolled to receive outage notifications. Very few customers (2 percent) have opted out of the outage notification program. Overall, customers are satisfied with the outage notifications; 6 of 10 survey respondents were satisfied with the timeliness of notifications, and nearly 7 of 10 said they received the right number of notifications. In addition, SDG&E has realized a 36-percent reduction in agent-handled outage calls.

Going forward, SDG&E plans to develop a status tracker for restoration work, make improvements to the accuracy of ERTs by shifting away from a system-wide average to more precise estimates based on substation and circuit-level data, incorporate machine learning into its ERT calculations, and enable two-way text messaging. //

// CONTACTS

Brendan Blockowicz

Manager of Digital and
Customer Experience
SDG&E

BBlockowicz@semprautilities.com

Aaron Franz

Customer Experience Manager
SDG&E

AFranz@semprautilities.com



My Account Tools and Budget Assistant

// HIGHLIGHTS

SCE has
2.5M
 customers enrolled in
MY ACCOUNT.

SCE has
700,000
 customers receiving
BUDGET ASSISTANT
 proactive bill notifications.

Customers with
IN-HOME DISPLAYS
 showing usage and
 pricing reduced
 daily usage by
3.7%.

Southern California Edison (SCE) offers energy usage web presentment features and energy management tools to customers with smart meters who have enrolled in **My Account**. These features and tools are designed to encourage customers to change their energy-consuming behaviors by providing information and notifications on energy usage and associated bills.

Through year-end 2018, nearly 2.5 million SCE residential customers were enrolled in My Account, an online web portal that provides historical billing, payment, and electric usage data along with other presentment features such as **Bill-to-Date**

and **Projected Next Bill** costs. Customers who are interested in knowing what their likely bill will be are provided with an estimate of their accumulated charges (Bill-to-Date), along with a forecast based on the current month's bill (Projected Next Bill). Although these features in My Account provide customers with personalized data on their energy usage, a 2017 study found these web presentment tools did not affect overall energy conservation significantly.

To complement the energy usage presentment features in My Account, SCE developed **Budget Assistant**, a proactive performance notification tool that provides nearly 700,000 enrolled (through year-end

2018) residential customers with routine notifications on how their projected costs compare to their preselected monthly spending target for each billing period. Customers who sign up for Budget Assistant alerts establish periodic (e.g., weekly) or conditional (e.g., if projected bill is trending x percent higher than budget) notifications based on the Projected Next Bill. Notifications are sent via email, text message, or voice message. Compared to non-participants, the approximately 700,000 residential customers enrolled in Budget Assistant save 0.5 percent on their energy usage.

For customers who are interested in receiving near-real-time energy usage and pricing information, SCE also supports customer-owned **In-Home Displays** (IHDs). The IHDs communicate with SCE's smart meters through a non-proprietary open standard Home Area Network (HAN). IHDs that are registered securely to the smart meter receive near-real-time usage information from the meter and energy-related text messages from SCE. In 2018, the 2,270 customers with active IHD service accounts reduced their daily average energy usage by 3.7 percent. //

// CONTACT

Eva Molnar

Manager, Pricing Implementation
Southern California Edison
Eva.Molnar@sce.com



Customer Experience Center Transformation

// HIGHLIGHTS

TECO has reduced
CALL VOLUME
by
18%.

TECO has improved
average
SPEED OF ANSWER
by
96%.

TECO has
IMPROVED
telephone service
levels by
154%.

Over the last few years, TECO (Tampa Electric & Peoples Gas) has been working toward a total customer experience transformation to achieve world-class customer service. One key objective of this holistic effort was improving the Customer Experience Center (contact center) performance with a focus on **people, process, and technology**. This included improving employee engagement, continuous improvement initiatives, system enhancements, and identification of key metrics to track performance. This multi-faceted approach resulted in improved customer and employee satisfaction and reduced operating costs through process efficiencies.

People

Focusing first on people, TECO's

leadership team met with customer service professionals (CSPs) to better understand customer experience pain points and CSP challenges. Based on feedback, the following initiatives were implemented:

- A Universal Agent model was created where CSPs were cross-trained and certified to assist with all primary contact center functions and call types. This provided agility and greater flexibility to address call volumes by type, throughout the month and seasonally, and minimized customers being transferred.
- Annual certification programs were created for soft skills, emergency procedures, and high bill training.
- The "Because We Care" initiative was created to connect with customers

during extraordinary moments and situations. Team members are encouraged to send a minimum of two hand-written, personalized cards per week based on a unique interaction with a customer.

Process

In addition, the customer experience transformation included a focus on process reviews and continuous improvement initiatives, leading to improved service levels.

- TECO restructured contact center teams, adding leads to create self-sufficiency and to reduce call transfers.
- More than 200 contact center procedures were reviewed, remediated, or developed and published online, providing CSPs with better information to assist customers and to promote first call resolution.
- The All Hands on Deck process, which is triggered by number of calls holding and longest call waiting, was created. Once initiated, focus is redirected to the phones to ensure service levels are met and customers aren't experiencing long hold times.

Technology

A key element of TECO's customer experience center transformation is technology. By making improvements to the workforce management system and automating processes and procedures, TECO can serve customers better. Some examples include:

- Simplifying and streamlining the move-in process, resulting in reduced average hold times and improvement in first contact resolution. A scripted environment guides the CSP through

the move-in process, reducing the average move-in call by approximately 30 percent.

- Investing in a secure document upload system so customers and CSPs can email ID verification documents securely back and forth, expediting the verification and move-in process.
- Tracking and forecasting call volumes in 15-minute intervals, matching call arrival patterns with staffing schedules to provide a more consistent customer experience.

As a result of investing in people, process, and technology, TECO's customer experience center has achieved:

- 154 percent improvement in telephone service levels.
- 96 percent improvement in the average speed of answer.
- 46 percent reduction in transfers.
- 92 percent reduction in abandoned calls.
- 18 percent reduction in call volume.
- Improved first call resolution as reported by customers.
- Improved Customer Service Satisfaction ratings by approximately 8 percent for Tampa Electric residential customers.

// CONTACTS

Karen Sparkman

Director, Customer Experience
Operations
Tampa Electric & Peoples Gas
KKSparkman@tecoenergy.com

Jeanne Thompson

Director, Service Excellence
and Operations Support
TECO Energy
jlthompson@tecoenergy.com



Mobile First Strategy

// HIGHLIGHTS

Mobile users make up

60%

of web users, and

80%

DURING A STORM.

Users enrolling in the web application make up

58%

TOTAL ELECTRIC CUSTOMERS

in just two years.

Call volume has

REDUCED BY

18%

since the mobile responsive web portal has been live.

In 2017, Tampa Electric went digital. The company launched its first customer self-service portal in conjunction with a new billing system. Initially, the focus of the web portal was to provide account and billing access for residential customers, as well as the ability to self-serve for outage reporting and updates. Three months later, more than 200,000 customers had created accounts—much higher than anticipated.

Tampa Electric created a working group to focus on the usability of the website and enlisted the help of customers through usability studies. Based on the feedback, the team focused on the customer self-service portal design as well as the public

websites to improve the mobile customer experience, making the experience easier and adding functionality based on the voice of the customer. In 2018, the web portal and other sites were reimaged with a focus on navigation and design for the smaller mobile screens.

The number of users who access the Tampa Electric website through smartphone or tablet devices now surpasses desktop users by a margin of 60 percent to 40 percent. These customers use their mobile devices to view and pay bills, report outages, complete online energy audits, and receive information during storm events. In fact, the volume of mobile users accessing Tampa

Electric's website increases to 80 percent during extreme weather events.

As of April 2019, more than 58 percent of Tampa Electric's active customers have a registered account on the Tampa Electric web portal. Customers are taking advantage of the web portal service even without a strong marketing push by Tampa Electric. The strong customer adoption comes from both improved usability as well as enhanced self-service and new functionality offerings. As recent as April 2019, the team released new functionality to improve experience and performance for business customers and to allow multiple users per account. Since initial implementation, the team has delivered more than 12 customer-facing enhancements per year.

The move to a mobile-first strategy is leading to improved customer satisfaction and improved operational efficiency. In 2016, Tampa Electric's digital strategy was virtually non-existent as its web portal and operating team did not exist. Three years later, more than 58 percent of Tampa Electric customers now are using the web portal. Of those, approximately 61 percent are returning visitors over the last 4 months.

In the 2018 JD Power Electric Business study, Tampa Electric was ranked in the 1st quartile nationally for all 5 online customer service attributes, resulting in a 78-point increase from 2016.

As for the JDP Residential studies, Tampa Electric improved Customer Service Online scores 32 points in 2017 from its 2016 scores and another 36 points through 2019 year-to-date, moving the company into the 2nd quartile nationally. Additionally, the improvements made to the responsive mobile website have helped reduce customer

call volume by nearly 18 percent since 2016, suggesting users are taking advantage of its self-servicing features.

Tampa Electric's success can be attributed to a strong intra-organizational relationship between the customer experience team and IT development, a strong reliance on the voice of the customer to drive functionality and use, and support from leadership. In 2019, Tampa Electric moved into the first quartile in JDP's Utility Digital Experience Study for mobile web. //

// CONTACTS

Nathan Heber

Manager, Customer Solutions
Tampa Electric & Peoples Gas
NCHeber@tecoenergy.com

Donnie Ware

Program Manager, Customer Solutions
Tampa Electric & Peoples Gas
dxware@tecoenergy.com



// RESIDENTIAL BILL PAYMENT OPTIONS

Today's customers want more options for paying their electric bills, and customers want different information on their bills. Bill payment is an important, recurring, and direct touch point between customers and their electric companies that has a direct impact on customer satisfaction.

Supported by technology, EEI member companies are making bill payment easier for customers by expanding payment options, reducing or eliminating payment processing fees, and offering payment options such as bill pre-payment, pay as you go, and more. In addition, electric companies are updating how bills are presented to customers.

// BENEFITS INCLUDE

- Aligning bill payment transactions more closely with how customers prefer to pay;
- Using digital technology to reduce friction associated with bill payments;
- Reducing or eliminating credit card fees;
- Creating more flexibility in how customers pay their energy bills, including via the voice channel, cash kiosks, real-time bill payment, text to pay, PayPal, etc.;
- Updating bill designs to provide the information that customers want and to make bills easier for customers to understand. //





An Exelon Company

Prepaid Energy Pilot

// HIGHLIGHTS

In Summer 2019, BGE will launch a one-year

PREPAID PILOT
with

1,000
customers.

The prepaid pilot utilizes

SMART METERS

to keep customers informed about their account balance.

In Summer 2019, Baltimore Gas and Electric (BGE) will launch a one-year prepaid energy pilot and will enroll 1,000 residential customers with smart meters to study the costs, benefits, and experiences customers encounter while on the prepaid pilot. Through email recruitment, BGE will invite a statistically valid pool of its residential customer population to participate in the pilot. BGE believes that, if available, 10 percent of its customer base would be interested in enrolling in a prepaid plan option, and is using the pilot to better understand which customers would want a prepaid plan and which features are most valuable to them. The pilot is not exclusive

to income-qualified customers and, by regulatory order, no more than 40 percent of the participants may be low-income customers.

Since payments are made prior to actual energy consumption, it is important that customers have near-real-time access to their account balance. To provide this service to customers, BGE is partnering with PayGo Utilities to analyze customers' smart meter data, develop daily account calculations for each household, and send account balance information by email, text, or phone call, as well as online 24/7. Other utilities offering prepaid service have reported customers use from 5 percent to 15 percent less energy,

largely because of this real-time feedback.

At the start of the pilot, all customers will submit a minimum \$40 payment to activate their prepaid account. Customers may add funds to their account at any time, in any amount. The \$1.50 convenience fee charged by some payment vendors will be reimbursed for the first payment each month. BGE also will offer customers an auto-reload feature that automatically adds a designated amount of funds to their prepaid account when the balance gets down to two days. Customers can enroll in the auto reload service at any time, with no fee.

BGE customers with arrearages of \$600 or less can participate in the prepaid pilot, and BGE will set aside the arrearage as a deferred balance with 25 percent of each payment applied to the deferred balance and 75 percent applied for future service. Disconnections under the Prepaid Pilot will occur as soon as the day after the customer's prepayment account balance reaches zero, but late payment and reconnection charges will not apply. However, customers also can request a grace period (5-day service extension) before the disconnection or after the disconnection.

Throughout the pilot, BGE will make qualitative and quantitative assessments on the customer experience, and will present the findings to the Maryland Public Service Commission six months after the pilot's completion. These findings will measure a number of factors, including:

- Changes in customer payment behavior;
- Extent and duration of disconnections;
- Change in call volumes of prepaid customers;

- Energy consumption levels compared to previous years, weather normalized; and
- Customer satisfaction levels.

BGE's prepaid pilot, part of a joint Exelon Utilities project, is an exciting step forward for the company to test and better understand customer preferences and the benefits of using innovative payment options. //

// CONTACT

Ajit Apte

Director, Customer Strategy & Governance

BGE

Ajit.Apte@bge.com



Online Bill Payment Agreement

// HIGHLIGHTS

Since January 2019,

2,500

**CON EDISON
CUSTOMERS**

set up a payment
agreement online.

Con Edison applies
ANALYTICS

to determine payment
terms that work for
the customer.

An
AGILE IT

approach allows
Con Edison to test
and release digital
customer tools rapidly.

In 2018, Con Edison completed a digital transformation of its website, including its bill payment platform. As part of this transformation, Con Edison set up new bill payment agreement functionality for customers who are behind on their electric, gas, or dual service bill. In January 2019, the updated payment agreement functionality went live, which allowed Con Edison to provide an additional payment agreement option and expand payment agreements to a new customer base that may not have qualified before.

Customers who receive an overdue or termination notices may be eligible for payment agreement. If a customer

has received a final termination notice, Con Edison will mail a payment agreement offer with standard terms at least 10 days before disconnecting service. Customers who owe between a minimum of \$200 and maximum of \$5,000 may be eligible to sign up for a repayment agreement on My Account. As of May 2019, around 2,500 residential customers established a repayment plan online.

Before the digital transformation, there was no online self-service option for customers to set up a payment agreement. Customers would have to call to make a down payment on past due bills to avoid service disconnection. Con Edison found

that some customers would be better positioned for successful repayment if the terms were more flexible and if an online option was available. Con Edison's solution was to create a new feature on its web portal, My Account, where eligible customers can choose between the standard bill repayment terms or an analytics-determined preferred repayment plan that is more likely to lead to full repayment but requires a higher down payment with longer and lower monthly installments.

Con Edison's digital transformation also allows for rapid development and testing of new features for customer self-serve options. For example, Con Edison also added new functionality in May 2019 that allows eligible customers in arrears to self-negotiate the payment agreement. Eligible customers will be able to compare the terms of the standard agreement offered to the preferred agreement and, if still not satisfied, have the option to self-negotiate terms. In addition, customers will be able to modify their preferred terms by making higher payments than the agreed upon amount during a billing period.

After launching the new payment agreement, a survey was rolled out to participants requesting feedback on customer satisfaction and opportunities for improvement. The survey revealed that 93 percent of customers found the transaction to be easy and that 100 percent were somewhat to very likely to complete the transaction online in the future. Going forward, Con Edison will look into providing an FAQ so that customers can better understand their payment agreement options. //

// CONTACT

Victor Filocomo

Senior Specialist, Digital Services

Con Edison

Filocomov@coned.com



Kiosk Payment Channel

// HIGHLIGHTS

More than
40,000
CUSTOMERS

use DTE Energy
kiosks monthly.

Kiosk customers report a

96%

SATISFACTION RATE.

Kiosk customers pay a

\$0

TRANSACTION FEE.

DTE Energy (DTE) is empowering customers to pay their bills—whenever and wherever they want—through a variety of payment channels including online, by smart phone, through an automated phone system, at authorized payment agents, and—more recently—through self-serve payment kiosks. The kiosks accept cash, checks, and credit cards at no fee and offer a fast, convenient, and less expensive payment channel to “unbanked” or “underbanked” customers or for customers who prefer to make payments with cash. DTE estimates around 100,000 customers fall within this category.

In 2014, DTE piloted four kiosks, including one at its busiest customer payment center in

downtown Detroit. The company found that the kiosks alleviated long lines, reduced walk-in customer wait times, and were more efficient than paying in the office. As of January 2019, DTE uses 51 kiosks located at independent grocers and other community-focused locations. DTE leases the kiosks through a partnership with Michigan-based payment solutions provider DivDat, which maintains and operates the kiosk network.

Every month, more than 40,000 DTE customers use the kiosks to pay their electric bills; roughly one-third of customers are making a payment on an overdue bill or a payment plan. Cash payments make up 85 percent of monthly transactions, indicating DTE is addressing its target market. In

addition, about 47 percent of customers make two or more payments each month, which supports the concept that customers will pay more often and at their convenience when payment fees are removed. New adoption on the kiosk network averages about 8 percent per month, and the kiosk consistently receives the highest customer satisfaction rating among the payment channels, averaging around 96 percent.

A video monitor atop most of the kiosks shows customers how to use the unit and how to access their account information by scanning a barcode on their paper bill or by inputting their home address or account number into the kiosk. Customers interact with the kiosk in Arabic, English, or Spanish. The kiosks do not dispense money—any extra payment is credited to the account, and customers receive an instant receipt via paper, text, or email as proof of payment. Accounts are updated in real-time and provide customers with a less costly alternative to authorized pay agents, which charge about \$3 in transaction fees and require extra time to transfer the customer's payment to DTE.

Given the success of the kiosks, DTE and DivDat have partnered with the local water company and other City of Detroit municipal agencies to expand payment convenience for customers paying their water bills, real estate property tax bills, and court fees.

DTE now is exploring ways to leverage the kiosk's instant payment verification to improve the restore process for customers disconnected for non-payment. Currently, customers must go through several steps and phone calls to turn power back on in their homes. //

// CONTACT

Ronald Gillmore

Project Manager, Customer Experience

DTE Energy

ronald.gillmore@dteenergy.com



Customer Payment Solutions Platform

// HIGHLIGHTS

All Exelon customers
will have access to
NEW PAYMENT CHANNELS
like **GOOGLEPAY**
and **APPLEPAY**
by 2020.

ComEd
**REDUCED CREDIT CARD
TRANSACTION FEES**
40%
for residential customers.

The Exelon family of electric companies [Atlantic City Electric (ACE), Baltimore Gas & Electric (BGE), Commonwealth Edison (ComEd), Delmarva Power, PECO, and Pepco] are introducing new options for customers that will enhance their bill payment digital experience. Exelon is developing a next-generation payment processing platform that improves existing mobile and online payment options and allows rapid integration of new functionality. A conversation that began with a discussion about enhanced reliability for payment processing quickly evolved and became the catalyst for deploying a new payment solutions

platform across all operating companies.

The new payment solutions platform, which went live for ComEd and PECO customers in March 2019, and will go live for BGE and PHI customers mid-2019, will strengthen fraud prevention features and enhance existing mobile and online payment functionality. The platform will support the following for customers:

- Real-time bill payment confirmation.
- Real-time confirmation of service connection (e.g., disconnection or reconnection authorization).
- Reduced credit card transaction fees for all residential customers.

- Text-to-pay, PayPal, GooglePay, ApplePay, and other channels by 2020.
- A redesigned and streamlined customer web portal experience so customers can store payment account information securely in their online account “wallet.”

In addition to the customer benefits, Exelon’s customer service representatives also benefit by having a new engagement portal that equips them to better serve customers and to resolve issues.

Exelon’s customer-centric approach includes identifying best practices and process improvement opportunities via customer surveys, focus groups, and usability testing. In addition, project implementation utilizes “agile methodology,” whereby every three weeks the project team completes the design, build, and testing of a discrete component of the overall project.

This project is a key step to providing bill payment options to customers in ways that meet customers where they are today. //

// CONTACT

Christine Brinkman

Vice President, Customer

Financial Operations

ComEd

Christine.Brinkman@exeloncorp.com



Tucson Electric Power

Customer-focused Bill Design

// HIGHLIGHTS

TEP involved its customers and employees to

REDESIGN

the monthly bill.

Improving the
CUSTOMER
experience improves the
BUSINESS
experience.

Customer satisfaction is

3%

HIGHER

with the new bill design.

In 2016, Tucson Electric Power (TEP) hosted workshops with employees and customers aimed at improving business services and redesigning the monthly electric bill. During these workshops, TEP asked customers to provide feedback for a complete redesign of the company's monthly electric bill. In the year that followed, TEP surveyed customers to gain a better understanding of what they looked for in a bill, where they focus first, and what information would best help them learn about their energy use.

The new bill was completed and went live in April 2018. Major changes include providing a more colorful layout and details about customer energy use, program participation, and pricing plans. This helped

to streamline the bill payment process, making it easier for customers to understand their energy costs and the value of electricity while presenting account information in a clear manner. As a result, TEP found that customers make fewer calls regarding their bills.

The new bill incorporates TEP customers' most requested features including:

- A clear due date and amount due;
- A table comparing daily usage between billing cycles and explaining cost fluctuations caused by temperature;
- A personalized breakdown of cost information per day to express the value of electricity compared to other daily expenses; and

- A bar chart showing the last 13 months of a customer's electricity consumption, comparing the current month's usage to the prior year's usage in the same month (i.e., comparing June 2019 to June 2018).

These improvements to the monthly bill provide an easier billing experience for the customer and present more information about their energy usage in a clear, colorful format. The new bill design also allows TEP to provide information about time-of-use and demand-based pricing plans that could help customers save on their monthly energy costs. The bills provide links to TEP's website, where customers can learn more about and sign up for different pricing plans.

Customer response to the new design has been positive and customer satisfaction has increased, according to TEP's higher J.D. Power Residential Utility Customer Satisfaction scores. The Billing and Payment index increased from 769 to 792. The attribute of Usefulness of Information on the bill increased from 7.64 to 7.85. TEP's overall customer satisfaction increased from 714 to 735. //

// CONTACTS

Denise Richerson-Smith

Director of Customer
Service and Programs
UNS Energy Corporation /
Tucson Electric Power
DRichersonSmith@tep.com

Linda Tiarks

Supervisor, Customer Infor-
mation Systems
UNS Energy Corporation /
Tucson Electric Power
LTiarks@tep.com



Customer Bill Payment Optimization

// HIGHLIGHTS

Today,
70%
of Xcel Energy customers pay
bills through one of three
DIGITAL CHANNELS.

By end of
Q1 2019
Xcel Energy customers could use
GOOGLE ASSISTANT
to pay their energy bill.

The electric power industry is digitizing everything from energy grid operations to customer bill payment. Customers increasingly want a digital or mobile energy bill payment option, so Xcel Energy is increasing options and promoting adoption of digital and online payment channels.

Today, 70 percent of Xcel Energy's payment transactions are done digitally. That number is up 14 percent from 2017. Digital payments include: a mix of customer-initiated and automated payments across channels, and programs such as the automated voice system, Web portal, Mobile app, electronic funds transfers, and AutoPay.

For example, Xcel Energy is working with Google to enable Google Assistant functionality. In May 2019, Xcel Energy customers were first able to use their Google Assistant-enabled speaker to ask about their account balance and to pay their energy bill when they have bank account information on file with Xcel Energy. This will be followed closely with similar functionality for Amazon Alexa-enabled speakers.

Xcel Energy also is working to reduce the cost of credit card bill payments and hopes to enable free credit card transactions in the future. Today, fewer than five percent of customers pay their bill with a credit card, in part, because these transactions incur a

substantial fee. Twenty-five percent of Xcel Energy customers are enrolled in autopay, which provides free wire transfers directly from a customer's bank account. Xcel Energy estimates that if customers were able to use a credit card with no fee, the number of customers enrolled would surge—a win win for customers and Xcel Energy.

In addition, Xcel Energy is making it easier for customers to register and to authenticate across current and new digital channels. Existing improvements like fingerprint and face ID on the mobile app help reduce friction. And, Xcel Energy is working to create a centralized customer identity and access management experience to further reduce friction in the payment experience, and beyond.

Xcel Energy also envisions additional customer payment solutions. For example, Xcel Energy is exploring moving from transactional text interactions to more interactive billing and payment experiences, where customers can view their bill and tap-to-pay all within the message itself. Xcel Energy is focused on continuing to meet customers in their preferred channel with the payment options and experiences they expect. //

// CONTACT

Shawn Bielke

Product Portfolio Manager

Xcel Energy

Shawn.Bielke@xcelenergy.com



// ABOUT THE EDISON ELECTRIC INSTITUTE

The Edison Electric Institute (EEI) is the association that represents all U.S. investor-owned electric companies. Our members provide electricity for about 220 million Americans, and operate in all 50 states and the District of Columbia. As a whole, the electric power industry supports more than 7 million jobs in communities across the United States. In addition to our U.S. members, EEI has more than 65 international electric companies with operations in more than 90 countries, as International Members, and hundreds of industry suppliers and related organizations as Associate Members.

Organized in 1933, EEI provides public policy leadership, strategic business intelligence, and essential conferences and forums.



Edison Electric Institute
701 Pennsylvania Avenue, NW
Washington, DC 20004-2696
202-508-5000 | www.eei.org

// ABOUT THE INSTITUTE FOR ELECTRIC INNOVATION

The Institute for Electric Innovation (IEI) focuses on advancing the adoption and application of new technologies that will strengthen and transform the energy grid. IEI's members are the investor-owned electric companies that represent about 70 percent of the U.S. electric power industry. The membership is committed to an affordable, reliable, secure, and clean energy future.

IEI promotes the sharing of information, ideas, and experiences among regulators, policy makers, technology companies, thought leaders, and the electric power industry. IEI also identifies policies that support the business case for the adoption of cost-effective technologies.

IEI is governed by a Management Committee of electric industry Chief Executive Officers. In addition, IEI has a Strategy Committee made up of senior electric industry executives and a select group of technology companies on its Technology Partner Roundtable.



The Edison Foundation

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Institute for Electric Innovation

701 Pennsylvania Avenue, N.W.
Washington, D.C. 20004-2696
202.508.5440 | www.edisonfoundation.net