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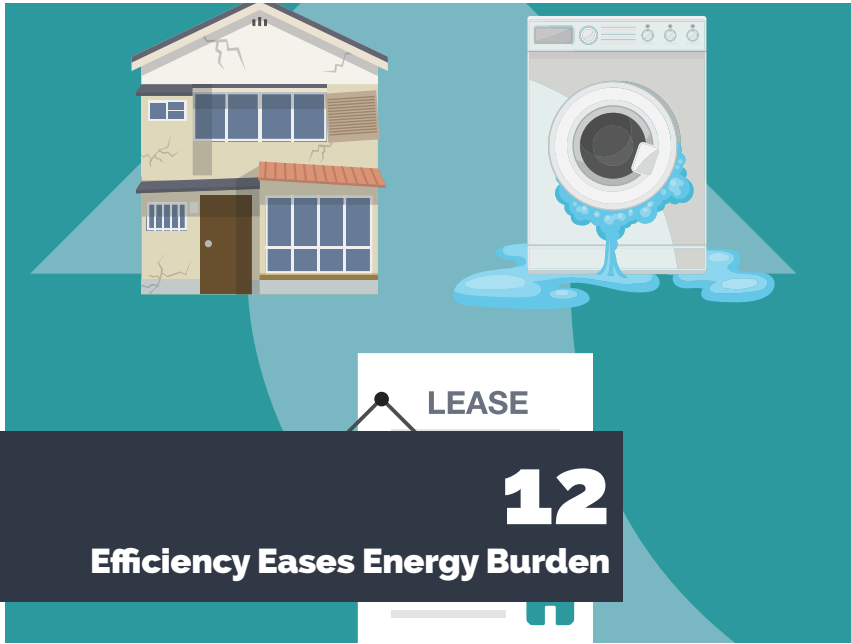
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Cover Illustration by Eric Westbrook

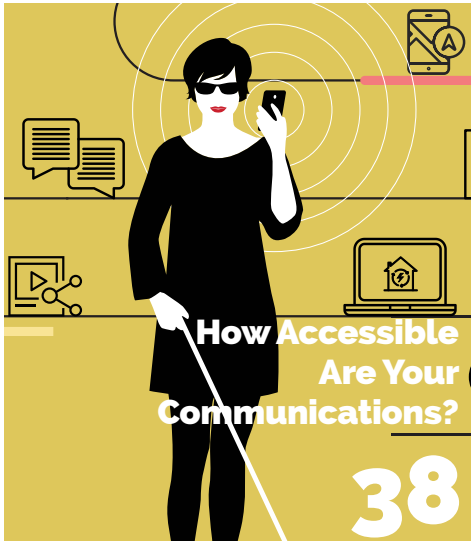


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Public Power Magazine (ISSN 0033-3654) is published six times a year by the American Public Power Association, 2451 Crystal Drive, Suite 1000, Arlington, VA 22202-4804. © 2020, American Public Power Association. Opinions expressed in articles are not policies of the Association. Periodical postage paid in Arlington, Va., and additional mailing offices.

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The American Public Power Association is the voice of not-for-profit, community-owned utilities that power 2,000 towns and cities nationwide. We advocate before federal government to protect the interests of the more than 49 million customers that public power utilities serve, and the 93,000 people they employ. Our association offers expertise on electricity policy, technology, trends, training, and operations. We empower members to strengthen their communities by providing superior service, engaging citizens, and instilling pride in community-owned power.

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PUBLIC POWER LINES

BY SUSAN PARTAIN, SENIOR EDITOR AND CONTENT STRATEGIST, AMERICAN PUBLIC POWER ASSOCIATION

Power for One, Power for All

Access to electricity might be a matter of life or death, national security, or a means to fulfill basic needs such as heating or safe food storage. However, access to electricity can also be fraught with customer concerns over cost, reliability, or environmental impact. Increasingly, utilities' business decisions — such as conducting public safety power shut offs, selecting a generation mix, or carrying out disconnect policies — are scrutinized for the impact on customers, especially if there is a disproportionate impact on any customer class.

Public power utilities are committed to powering customers through life's ups and downs. This issue of *Public Power Magazine* explores utility considerations and programs to serve populations with a variety of needs.

Maintaining a reliable power system is only the first step. Serving each and every customer equally well means that utilities must constantly monitor whether their rates, programs, customer service, and communications are designed to answer a range of needs. As the illustration on the cover conveys, electricity is key to connecting all parts of the community.

A common theme in the articles in this issue is that improving how we serve certain types of customers improves how we serve all customers. Whether this is by becoming more resilient to serve military customers (see page 32), redesigning rates or programs to reduce inequities (see page 6), or improving accessibility of information (see page 38). Utilities can also empower staff to be more compassionate and judge when a situation necessitates a break in policy (see page 14).

This focus on community and providing the best possible service to all customers is even more important in the face of an increasingly competitive environment. As the American Public Power Association's new CEO, Joy Ditto, noted in the Q&A (see page 29), public power utilities are facing threats in the form of new competitors vying to provide an array of energy-related services to our customers. If we can get ahead of the curve, then public power will be the obvious choice for customers.

Our close and careful attention to serving our entire community well, and being a partner in lifting everyone's quality of life through access to reliable, affordable, and environmentally responsible electricity, is a core advantage of public power. How we define this advantage and our overall value will change, especially as we continue to see the average bundled rates of cooperative and investor-owned utilities come closer to public power's rates (see page 40).

The public power model can be an advantage in serving special populations. This is not only because of the resources we are able to access as public, not-for-profit entities, but because of our strong "community-first" culture.





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Affordable Energy for the Whole Community

BY JESSICA PORTER, CONTRIBUTING WRITER

Electricity is an essential part of our everyday lives, yet for some people, it can be out of reach due to cost. Public power utilities support customers in their service territories through partnerships and by offering assistance to promote equitable access to electricity.



Reducing the burden

Sacramento, California was hit hard by the recession in 2009. Thirty-six percent of the Sacramento Municipal Utility District's customers are considered low-income, and the disparity gap has grown exponentially over the last 10 years.

Every year, SMUD looks at its budget, programs, projects, and initiatives to make sure value is being delivered to its 1.5 million customers fairly and equitably. Currently, 75,000 customers are enrolled in SMUD's Energy Assistance Program Rate, for which SMUD annually budgets between \$30 and \$35 million.

The EAPR program offers a discount to customers at 200% of the federal poverty level or lower. However, a recent analysis of the program showed that enrolled customers still struggled to pay their bills.

"What we found was customers on the lower end of the poverty level were unduly burdened; they had a higher electric bill burden than customers on the higher end, not to mention most of their homes were not energy efficient," said Kim Rikalo, one of SMUD's managers of customer delivery. "So that made us ask the question, 'Is what we're doing enough?'"

In response, SMUD began a three-year restructuring of EAPR. The changes include increasing the EAPR discount for those in the lowest ranges of the federal poverty levels (0%-100%), and decreasing the discount for those in the upper ranges (101% to 200%).. For example, the discount for customers below 50% of the poverty level will rise to \$70 by 2021, which is up from \$50 they received in 2019. Customers closer to 200% of the poverty level will see the discount decrease from \$30 to \$10.

Initially, SMUD planned on deploying the new rates in one year. However, it reviewed the strategy with partners in its community — including other non-profits, non-governmental organizations, business and ethnic chambers, and charities — and they recommended a three-year transition period. Deploying the program over three years gives SMUD the time necessary to reach out to the customers who would be receiving a lower discount. In the meantime, the public power utility can focus on helping those customers learn about energy-efficiency bundles and energy-efficient upgrades to reduce their electric burdens and gain more control over their bills.

“For the low-income population, control is a critical aspect,” Rikalo said. “Most, if not all, of the industry’s studies indicate that customers feel like they don’t have control over their electric bills, so the more we can help with this, the more we bridge the gap.”

Longer-term support

To help low-income customers in its service territory, Tacoma Public Utilities offers a 30% discount for customers who are 62 years of age or older and for customers receiving disability income. The utility also recently began providing a Bill Credit Assistance Plan, which is a 20% credit applied to enrolled customers’ accounts each time their bills are paid in full and on time. Both programs are designed for customers with income levels up to 150% of the federal poverty level.

“What we found was customers on the lower end of the poverty level were unduly burdened; they had a higher electric bill burden than customers on the higher end, not to mention most of their homes were not energy efficient. So that made us ask the question, ‘Is what we’re doing enough?’”

KIM RIKALO

MANAGER OF CUSTOMER DELIVERY
SACRAMENTO MUNICIPAL UTILITY DISTRICT

So far, more than 6,000 customers receive the discount rate and more than 2,000 customers participate in BCAP. TPU budgets \$3.2 million biannually for BCAP and provided \$2.5 million for the rate discount from January to October 2019.

Before creating BCAP, TPU offered an assistance program that gave customers a lump sum of money. The utility realized the program provided only short-term relief — many customers found themselves needing assistance again just two to three months later.

“Through BCAP, the discount rate is lower than the previous program on average, but customers have been more successful in paying bills on a regular basis,” said Francine Artis, TPU’s customer services assistant manager of customer solutions. “Twenty percent of people who received the lump sum amount of money were back in crisis again.”

Partnering with community organizations is an essential component in TPU’s programs for low-income customers. It partnered with the United Way of Pierce County’s Center for Strong Families, which provides financial planning assistance to underserved communities. All customers enrolled in BCAP who complete financial training through the United Way are eligible to receive up to a \$160 credit on their utility accounts.

“We’re trying to put people in a position to better manage their utility bills,” said Steve Hatcher, TPU’s customer services manager. As of October 2019, more than 50 households had participated in the financial education credit program.



Meeting customers where they are

SMUD's team also works closely with its community to institute multi-year partnerships with organizations in underserved communities.

"Collaboration is very important because we are a customer-owned utility, so we need to be good stewards of the dollars customers put into the program," said Jose Bodipo-Memba, director of SMUD's Sustainable Communities programs. "If we can improve the environment and the economy, as well as mobility and access to social services, it makes our community a more desirable place to live, which results in more customers with a higher quality of life."

Employees go to meetings and events held by local non-profits to educate community members about programs such as EAPR, but community partnerships don't end with education. For example, SMUD provided new HVAC systems to two of the buildings owned by City of Refuge Sacramento, which aims to help people living in marginalized communi-

ties in the city and operates two safe houses. SMUD also donated \$50,000 and a service day to an organization working to improve the city's housing opportunities for low income and formerly homeless residents. The partnership resulted in the interior renovation of 40 units, provision of new lighting and appliances, painting of the entire complex, construction of a playground, and landscaping beautification.

"We're trying to find out how to leverage existing nonprofits so they can reach more of our at-risk customers to maximize our impact to the fullest extent," Bodipo-Memba said.

TPU takes a similar approach, holding an annual event with community partners to make sure they're all up to date with information on the utility's programs and services. After the event, those organizations can distribute information among the community members they serve.

"We pride ourselves on approaching this at a holistic level," Artis said. "If a customer can't pay his or her utility bill, we look at why. Are they unemployed? Is their house inefficient? Is their usage high? We invest millions of dollars in our low-income weatherization program that helps customers lower their bills."

TPU works with property managers of low-income housing developments to do onsite enrollment for utility programs. Residents are notified about events in advance so they can be prepared to ask utility employees about their bills and enroll in assistance programs.

"We're willing to go where the customers are instead of waiting for them to come to us," Hatcher said. "We will be going mobile shortly by purchasing a vehicle that can go to areas where our customers are. A lot of our customers are busy, working multiple jobs, and they can't always show up when the office is open."

The utility also works with school districts, the Tacoma Housing Authority, ethnic organizations, and the Department of Corrections. TPU's team attends as many community events as possible to spread information.

"We see a great deal of value in partnering with community organizations to help us serve our customers," Hatcher said. "Many of us are serving the same customers for different reasons."

Having a team dedicated to reaching underserved customers is an essential component of these programs for TPU and SMUD. TPU

AFFORDABLE ENERGY FOR THE WHOLE COMMUNITY

team members go to conferences and seminars that focus on serving low-income customers for additional training. They never use the term “low-income” with customers to avoid making them feel stigmatized.

Many employees on SMUD’s team are multilingual. TPU provides materials in English, Spanish, Vietnamese, Russian, Cambodian and Korean.

“We want to make sure people working with these customers can empathize and develop relationships,” Hatcher said. “Some customers are very reluctant to ask for assistance or intimidated by government organizations. When a customer comes to the office, the response of our team members is very important. If it’s a good experience, then word of mouth will go out very quickly.”

Accountability

With all assistance programs, utilities have an obligation to ensure funds are being used appropriately and not being taken advantage of by ineligible customers. Customers are required to requalify every two years to participate in TPU’s programs. SMUD customers are required to fill out an application (which can be done in print or online) and provide income documentation for all adults in the household.

TPU also offers payment arrangements, budget billings, and participates in pledges from outside agencies for low-income customers.

SMUD also offers a variety of payment arrangements for all customers and an Energy-HELP program that answers immediate needs for customers in crisis. It’s also working on

creating a community priorities sensitivity map to help identify residents’ needs by sector, which will help the utility better invest in education, the environment, transportation, and safety. To help moderate-income customers, SMUD is on track to deliver a program that will offer rebates on affordable appliances.

“We’re a partner in our community, not just a company; most of us live here, too. Offering assistance allows us to be part of the solution rather than part of the situation in which people become homeless because they can’t pay their bills,” Artis said. “We try to embrace the community and let them know we care, which is part of providing a service. Utilities like heat and water are not optional — they are parts of life that need to be affordably available to everyone.”

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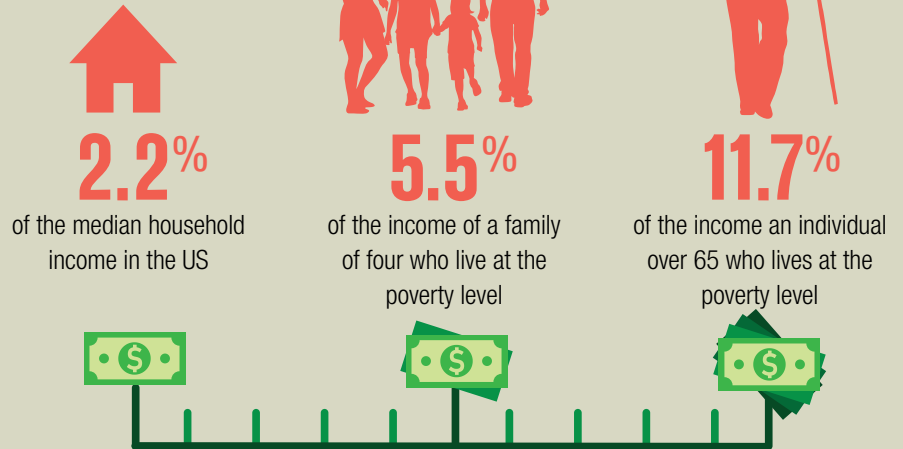


The average US household pays

\$1,411.80

for electricity each year

THAT IS:



Sources: "2018 Average Monthly Bill- Residential," Energy Information Administration, www.eia.gov/electricity/sales_revenue_price/pdf/table5_a.pdf
 "Income and Poverty in the United States: 2018," United States Census Bureau, www.census.gov/library/publications/2019/demo/p60-266.html

This is also known as a household's **ENERGY BURDEN.**

The average energy burden for low-income households is

8.2%

ENERGY BURDEN INCREASES FOR THOSE WHO:



Live in older, draftier homes



Have older, less efficient appliances



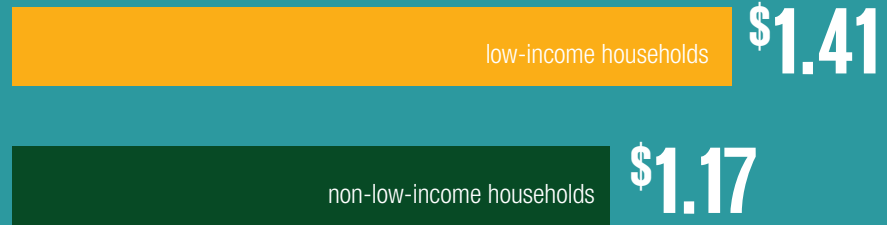
Rent instead of own their home



Source: U.S. Department of Energy, www.energy.gov/eere/articles/3-new-tools-advancing-energy-affordability-low-income-communities

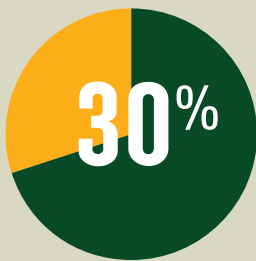
AVERAGE COST OF UTILITIES PER SQUARE FOOT

This means **INEFFICIENCY COSTS LOW-INCOME HOUSEHOLDS MORE**



Source: "Lifting the High Energy Burden in America's Largest Cities: How Energy Efficiency Can Improve Low Income and Underserved Communities" Energy Efficiency for All. www.energyefficiencyforall.org/resources/lifting-the-high-energy-burden-in-americas-largest-cities-how-energy/

More than
38 million
people in the US live at or below
the poverty line, and



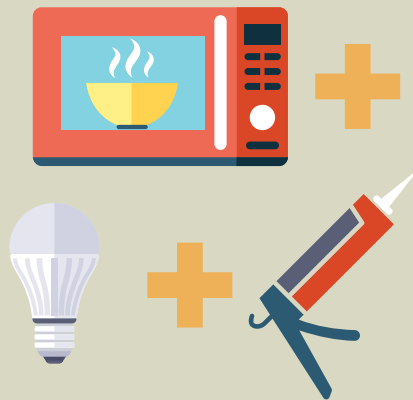
of Americans live in
low-income households.

Sources:
U.S. Census Bureau. www.census.gov/library/publications/2019/demo/p60-266.html
"State Health Facts." Kaiser Family Foundation. <https://www.kff.org/other/state-indicator/population-up-to-200-fpl/>

Efficiency improvements such as
insulation, lighting, and appliances
can make a big impact.

13% to 31%

potential electricity savings from
efficiency improvements in low-
income households



Source: Department of Energy. www.energy.gov/sites/prod/files/2019/01/f59/WIP-Energy-Burden_finalv2.pdf

This means big
savings that last.
Weatherization and
efficiency upgrades saved
households on average

\$283

every year



Compare the energy burden for people in your area to other communities,
your state, or the country with DOE's Low-Income Energy Affordability Data
Tool www.energy.gov/eere/slsc/maps/lead-tool.

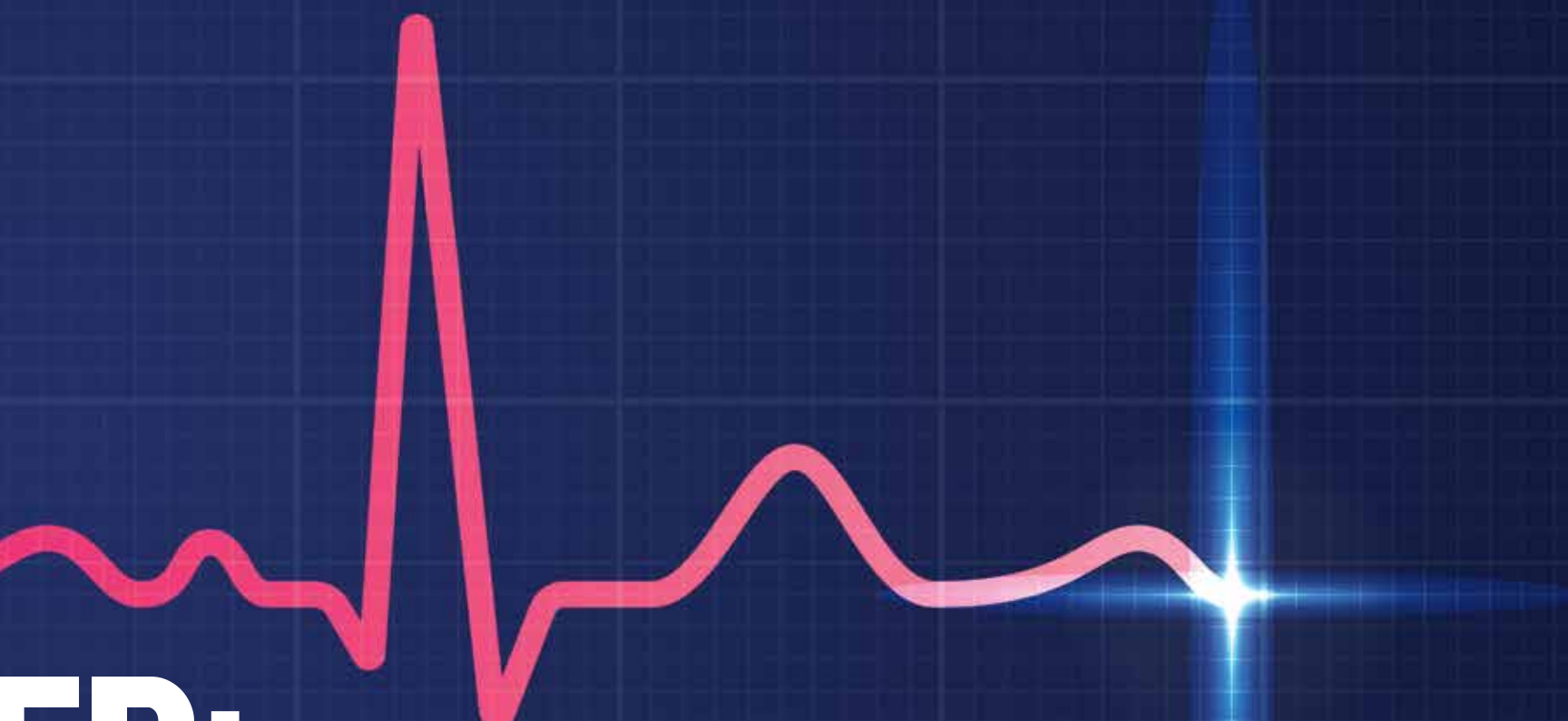


CRITICAL POWER

Supporting Customers with Medical Needs

BY **SUSAN PARTAIN**, SENIOR EDITOR AND CONTENT STRATEGIST,
AMERICAN PUBLIC POWER ASSOCIATION

ER:





Sometimes having electricity is a matter of life or death. There are customers who cannot live without medical equipment that is powered by electricity, and others who depend on electricity to keep medications cold, fend off heat-related conditions, or for other critical reasons.

As public power utilities keep the lights on for their communities, they go the extra mile to ensure that customers who depend on electricity aren't stranded in a major outage or if they require assistance to pay their bill. From coordinating with public safety officials, to communicating with customers about backup options, and formalizing safeguards in disconnect policies — public power shows that compassion comes first.

UNDERSTANDING THE SCOPE

A study in the *Journal of Public Health and Managed Practice* found that for every 100,000 people living in private residences, about 218 depend on electricity for a life supporting medical need. Utility and emergency response teams can also reference the Department of Health and Human Services' emPower Map to find out how many Medicare beneficiaries who rely on electricity-dependent medical equipment live in their area.

As public power utilities have a strong track record in reliability, it is rare that customers

would need to be concerned about sustained outages. The challenge often comes down to how to manage restoration following a storm or other major event.

Wayne Scarbrough, assistant general manager at Athens Utilities in Tennessee, said that the utility's medical necessity protocols are most helpful to have in place during the winter, when the area experiences ice storms that might have a big impact on the electric system.

Outside of major events, Scarbrough said the utility has a good track record of getting all customers restored within 30 minutes. In the event of a major outage, the utility reaches out to customers with a life-sustaining need for electricity to make sure they are aware of the situation.

"We aren't saying 'We will have you back on first,' but the call could say, 'We might not have you back on within the next 48 hours... so please take steps,'" said Scarbrough. Athens Utilities encourages customers with special needs to have a backup plan and asks them to think through how they might move to an emergency location.

The ADA National Network advises people who use devices such as ventilators, oxygen, or power wheelchairs to have a plan for alternative sources of power. For example, they can ask if nearby fire departments or hospitals can support their needs in an emergency.

ALLOWING FOR COMPASSION

Tim McCollough knows the stress of seeking to get electricity restored for a life-sustaining purpose. In May 2019, McCollough was visiting his father, who required oxygen as part of home hospice care, when a meter technician from the utility came by to shut off the electric service due to non-payment. Fortunately, McCollough had a backup battery-powered oxygen concentrator on hand, which he turned on before connecting with the utility about getting service restored.

The issue stemmed from an error on the billing address, and it took many calls and steps to resolve the error and get the power back on.

The experience stuck with McCollough, who serves as a deputy director at Fort Collins Utilities in Colorado. “The first thing that was most sobering to me was understanding how this same thing could have happened in my own utility,” said McCollough in a blog post for the American Public Power Association.

HHS has a list of state disconnection policies as a resource available to beneficiaries of the Low-Income Home Energy Assistance Program (LIHEAP), which details the policies and criteria set by state utility commissions about when utilities cannot disconnect customers. However, public power utilities are often outside the purview of utility commissions, and usually have to set their own policies.

In a follow-up interview, McCollough said that almost immediately after returning to work following the incident with his father, he gathered the utility staff and shared his story. Most importantly, he emphasized to staff that they are empowered to make decisions when policies and procedures “don’t fit.”

He said the message was well-received by staff, and that many told him stories of dealing with situations where following a set policy or procedure “doesn’t feel right.”

“Procedures do not have compassion; our people have compassion. We’ll fix the billing issues later. You can’t fix the customer relationship later — that has to be done in the moment.”

TIM MCCOLLOUGH
DEPUTY DIRECTOR
FORT COLLINS UTILITIES, COLORADO

“Maintaining a financially sustainable utility is critically important, but we must not forget compassion,” McCollough noted in his blog. “Those of us in utility leadership must empower our employees to resolve these situations in the moment. Without that empowerment, we are stuck with our established procedures. Procedures do not have compassion; our people have compassion.”

“We’ll fix the billing issues later. You can’t fix the customer relationship later — that has to be done in the moment,” emphasized McCollough.

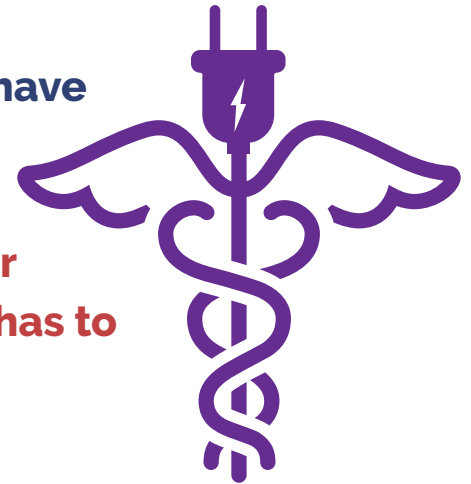
McCollough recommends that utility operations staff and management regularly review incidents, customer complaints, and other feedback to determine if there are any policies and procedures that aren’t working or that need to be adjusted.

“We have to keep a close eye on the customer service side of our business so that we can adapt to changes, but also have to understand the impact of when we do make policy changes,” he said. “Sometimes there are unintended implications, and if you don’t have

a high frequency of looking at your issues, you may not be able to recognize that you might have fixed one thing but created a problem in another place.”

To gather additional customer feedback, Fort Collins Utilities asks employees from all levels to share their experiences. “Because we’re public power, we live in our communities. We can think of ourselves not just as ones who provide the service, but we are our own customers as well,” noted McCollough. He advised that utility leaders should make an intentional effort to seek feedback from customers across different socioeconomic classes and hard-to-reach groups to see if any policies have a disproportionate impact.

Relating back to the experience with his father, he said, “The only way I could make a payment was by credit card and over the phone — those are two things that some people don’t have. And if you don’t have the means to drive across town... it would have been impossible.”





A PERSONAL TOUCH

Amy Burris, customer service manager at Richmond Power and Light in Indiana, noted that the public power utility keeps a list of customers who depend on electricity for life support purposes. Customers fill out a form that a doctor must sign that lets the utility know that the customer has a medical need for electricity. The form includes some basic details, such as the healthcare provider's number and the type of device needing power.

Burris explained that customers on Richmond's life support list are specially flagged, so if one appears on the utility's disconnect list because of nonpayment, then an extended process ensues. On top of the usual notices the utility sends, life support customers receive a certified letter that informs customers they have another 10 days to pay. After that point, if the bill still has not been resolved, then a utility employee reaches out, often in person, to see if the customer can call the utility to discuss options to receive assistance on the bill or if there are other ways the utility might be able to support that customer.

"We try to make sure that we have actually talked to the customer," noted Burris. "We spend quite a bit of manpower in trying to notify them so we don't have to shut them off."

Burris said that by sending someone in person, the utility can often find out more information, such as if the property is now vacant, or if the customer's phone number has

changed. She stressed that the utility documents all efforts to notify customers.

"You want to be sure [the customer is] aware, but you also want to cover the utility," added Burris.

Burris said the utility is careful to note on its form that being part of the list does not release a customer from the obligation to pay the bill. She noted that some common misperceptions among customers include that the utility can restore the customer's individual home in the event of an outage, or that they do not need to worry about having emergency backup plans or generators.

To counter these misperceptions, Burris said that the utility provides customers with a letter explaining battery backup options, and the actions the utility takes when customers are added to the life support list (such as tagging the customer's meter and nearby distribution poles).

"We always make sure that they understand they'll need battery backup or be prepared in an emergency," said Burris.

Athens Utilities also makes sure to have that personal contact with people on its medical list each year. The utility keeps hard copies of letters from healthcare providers in its dispatch center, and once a year, the dispatcher calls all customers on the list to check if the need is still active. If the customers affirm the need, then the utility keeps them on the list — customers do not have to send another letter to qualify again.

Both Scarbrough and Burris noted that a challenge to having such a list is that customers will often question what does and doesn't qualify as "life sustaining" needs. Both utilities leave that to the healthcare professionals to decide.

"We have a level playing field when it comes to how we treat customers — whether they have critical life support services or they're just trying to cook for their families. I consider what we do on the electric side as a critical public safety and public health function in general," said McCollough. "Our priority is to get everyone's power back on."

A PUBLIC SAFETY MATTER

“If someone is in a critical life safety issue because of a power outage, we ask that they call 911,” explained McCollough. “We can't provide the medical care necessary ... We're in the business of keeping the lights on, and that's where we need to stay in our core business.”

Burris provides an updated list of the life support customers to local emergency response teams on a monthly basis.

For Silicon Valley Power in California, customers with a medical need for electricity are asked to connect to the community's emergency services in the event of an outage. Kathleen Hughes, senior division manager of customer engagement at SVP, said that the public power utility offers “background support,” but that the fire department registers individuals with critical equipment, and handles response to their electrical needs as part of a public safety emergency response.

CRITICAL POWER: SUPPORTING CUSTOMERS WITH MEDICAL NEEDS

The utility revisited how to support customers with medical needs over the summer, as the region began to discuss the implications of the public safety power shutoffs to reduce wildfire risk. SVP's service territory was not directly affected by the shutoffs. However, given its interconnection with nearby systems that were impacted, SVP had a plan in place in case it had to curtail use through rolling blackouts. Hughes said such curtailment might have affected about half of the approximately 90 customers who have critical equipment in their homes.

To prepare, SVP developed marketing materials on outage preparedness and handouts that detailed which facilities would be open for backup in the event of a shutoff. SVP distributed these materials at senior centers, libraries,

and other facilities; sent information via email, and conducted other public outreach to spread the word.

The preparation also involved a county-wide effort, which Hughes noted brought about greater interdepartmental coordination around outages.

"No one really ever had to think about the electricity system, how all our buildings were connected, how our generators are connected ... until planning for the public safety power shutoffs began," said Hughes. "It really opened up the doors to discussion."

Previously, out of concerns for privacy of personal health information, the utility did not have information on customers with critical equipment. Now, the fire department scrubs the list of any sensitive data and then sends it to SVP.

"It's not an official change in policy, but heightened awareness," said Hughes.

She explained that increased coordination helps the utility understand what public safety is already doing and how it can help that effort. Looking ahead, SVP is exploring how it can support customers with critical-care needs, such as through rebates or other programs to provide backup equipment.

In Athens, crews doing repair work or building lines are also made aware of who is on the emergency medical services list via a "very prominent" notation that appears on every page of a customer's account information. Crews can search or reference by circuit to see if any emergency medical accounts are affected by work. Details are limited, however, to protect customers' privacy.



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Making Energy Affordable for Low-Income Populations

Every month, millions of Americans face tough choices on whether or not they can continue to use electricity, because they do not have money to cover the cost of their bill. To help, many public power utilities offer energy assistance programs, and partner with other local agencies to offset the cost of energy for vulnerable customers.

For 30+ years, the Low-income Home Energy Assistance Program (LIHEAP), managed by the U.S. Department of Health and Human Services, has provided funding to help households with low incomes meet their immediate home energy needs.

IN 2019

Congress appropriated



\$3.69 billion
for the program

IN 2018

The program served more than



5.8 million
households

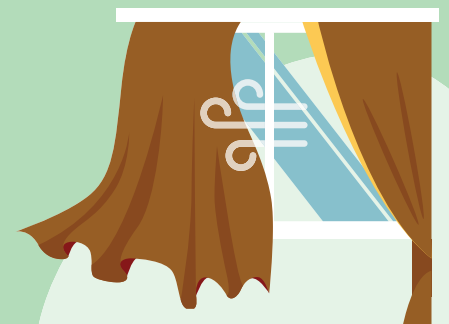
State-level administering agencies helped low-income households receive an average of:



\$138-\$1,345
for heating



\$143-\$751
for cooling



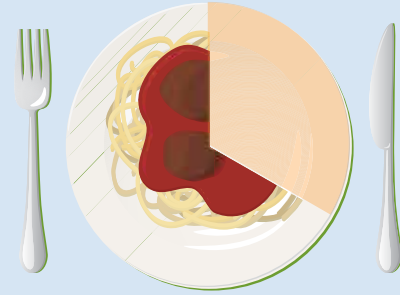
\$1,405-\$19,115
for weatherization projects

Despite the state assistance, the funding is not enough to cover needs.



3/10

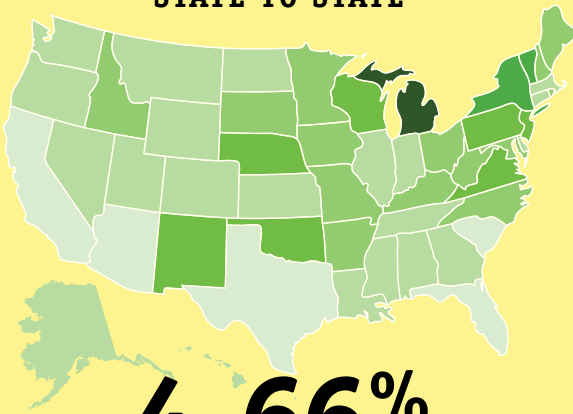
households receiving LIHEAP funds
used their stove or oven for heat



1/3

went without food at least
one day of the past year

STATE TO STATE



4-66%

of eligible households
received assistance in 2018

NATIONWIDE



only

1 in 5

eligible households
receive LIHEAP benefits

Sources:
LIHEAP Data Warehouse, Department of Health and Human Services –
Administration for Children and Families, https://liheappm.acf.hhs.gov/data_warehouse/

2018 National Energy Assistance Survey, National Energy and Utility
Affordability Coalition, <https://neuac.org/advocacy/liheap-advocacy/liheap-social-media/>

**Connect with your local office to find out who
qualifies for assistance in your state or territory
and how to apply: [www.acf.hhs.gov/ocs/
LIHEAP-State-and-Territory-Contact-Listing](http://www.acf.hhs.gov/ocs/LIHEAP-State-and-Territory-Contact-Listing)**



THE SUN SHINES FOR ALL

Community Solar for Low-income Populations

BY MEENA DAYAK, VICE PRESIDENT, INTEGRATED
MEDIA AND COMMUNICATIONS

In recent years, many programs and funding options have opened up to extend the benefits of solar power to low- and moderate-income consumers. One of the most popular options is community solar. Community solar — sometimes described as shared solar or locally controlled solar — includes any solar project or purchasing program in which the benefits flow to multiple community participants such as individuals, businesses, and nonprofits.

The Solar with Justice report from the Clean Energy States Alliance notes that participation in the solar economy can help ease the disproportionate social and economic burdens that low- to moderate-income households bear by helping to reduce electricity bills, provide jobs, and build sustainable communities. “Solar can also make decision-making more democratic by giving residents of under-resourced communities more control over their energy choices,” the report states.

Impetus to do good and save

Community solar programs have been established in 30 states across the country. California, Colorado, New York, and Oregon have incorporated low income carve-outs as part of their community solar policies. Colorado, New York, and Oregon mandate certain percentages of low-income subscribers, whereas California requires 100 megawatts of their 600-MW solar program to be located in “disadvantaged communities.” California, Massachusetts, and Washington, D.C. offer various financing mechanisms and pilot programs to extend the benefits of renewable power generation to low- to moderate-income communities.

Jenny Heeter, senior energy analyst at the National Renewable Energy Laboratory, said the impetus for states to pursue community solar is making sure everybody has access to solar and the associated bill savings. “It’s an equity issue. If some people who own their homes and have clear roofs on which they can put solar and save money, it’s not really fair to other people who don’t have that.”

If states are offering grants or rebates, or requiring utilities to offer them, they want to make sure people across the board — and not just those who own homes — are able to take advantage of such options, explained Heeter.

In September 2019, the U.S. Department of Energy announced the National Community Solar Partnership, a coalition of stakeholders working to expand access to affordable com-

munity solar to every American household by 2025. This partnership provides the tools and information to design and implement successful community solar models to state, local, and tribal governments; utilities; businesses; non-profit organizations; and others.

Nonprofit organizations like GRID Alternatives, the Rural Renewable Energy Alliance, and Citizens Energy Corporation are also piloting new approaches to solar.

“Low-income households need to save money and want to be responsible environmentally. Providing them an opportunity to participate in a community solar project can provide a ‘benefits trifecta’ — it saves them money, addresses climate change, and improves their relationship with the host utility,” said Peter Smith, CEO



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“We didn’t want to have any months where their bill would actually increase.”

BRETT NIEMI
SENIOR ENERGY SERVICES
REPRESENTATIVE
WPPI ENERGY

of Citizens Energy Corporation, a nonprofit that partners with utilities to help low-income families pay their electricity bills and access renewable energy.

WPPI Energy, a public power joint action agency, conducted social engineering feasibility studies for community solar projects in two of its member communities. The feasibility studies were funded by a grant from the American Public Power Association’s Demonstration of Energy and Efficiency Developments research and development program. Brett Niemi, senior energy services representative at WPPI, said, “We found positive feelings and support towards the community solar programs. In general, people thought it was a great idea — good for community pride. If they could generate their own electricity, they thought that was a good thing.”

Niemi said the research team — which included the neighboring WPPI member communities of Baraga and L’Anse in Michigan’s Upper Peninsula, representatives from the state’s Western UP Planning & Development Region, and researchers from nearby Michigan Technological University — found that exploring public sentiment about a proposed community solar project provided a great opportunity to educate customers. As many customers did not know they owned their utility, the opportunity to engage them and brand the public power utility was a bonus.

SOLAR POWER FOR INCOME QUALIFIED HOUSEHOLDS

Get all the benefits of solar power for 25 years without any of the headaches. The Village of L’Anse has begun the process of bringing Community Solar to our customers and invites you to participate. We make it easy but panels are limited. Only 25 households can participate in the Income Qualified Community Solar plans. Participants are eligible for up to a 10 panel subscription on a first-come, first-served basis.

This program is made possible by a grant from the Michigan Energy Office.

Credit Schedule	Net Bill Credit - Monthly		Net Bill Credit - Annual		Net Bill Credit over 25 Years
	Years 1-10	Years 11-25	Years 1-10	Years 11-25	
25-year on-bill financing	\$ 23	\$ 21	\$ 270	\$ 250	\$ 6,430

* Credits will vary depending on utility performance.
Contact the Baraga/Anse/L'Anse Community Action Agency at (907) 432-5528 to see if you qualify.

WANT TO SUBSCRIBE? GO TO VILLAGEOFANSE.ORG OR THE VILLAGE OFFICE FOR AN APPLICATION.

L'Anse
Village by the Bay

At Citizens Energy Utility we join forces with other local not-for-profit utilities through WPPI Energy to share resources and lower costs.
villageofanse.org (907) 534-6116
A WPPI Energy community

Subscription options

Customers who might already find it difficult to pay their monthly bill are unable to pay a premium for electricity generated from renewables. So, utilities hoping to make community solar a viable option for low- to moderate-income customers must be able to show savings potential.

Based on the study’s conclusion, and with support from WPPI, the Village of L’Anse built a community solar program for the entire community, targeting all income levels. However, the public power utility focused on increasing access to the programs for low-income customers. The feasibility studies revealed that customers wanted options for how they could buy into the program and that they were worried about transferability of panels.

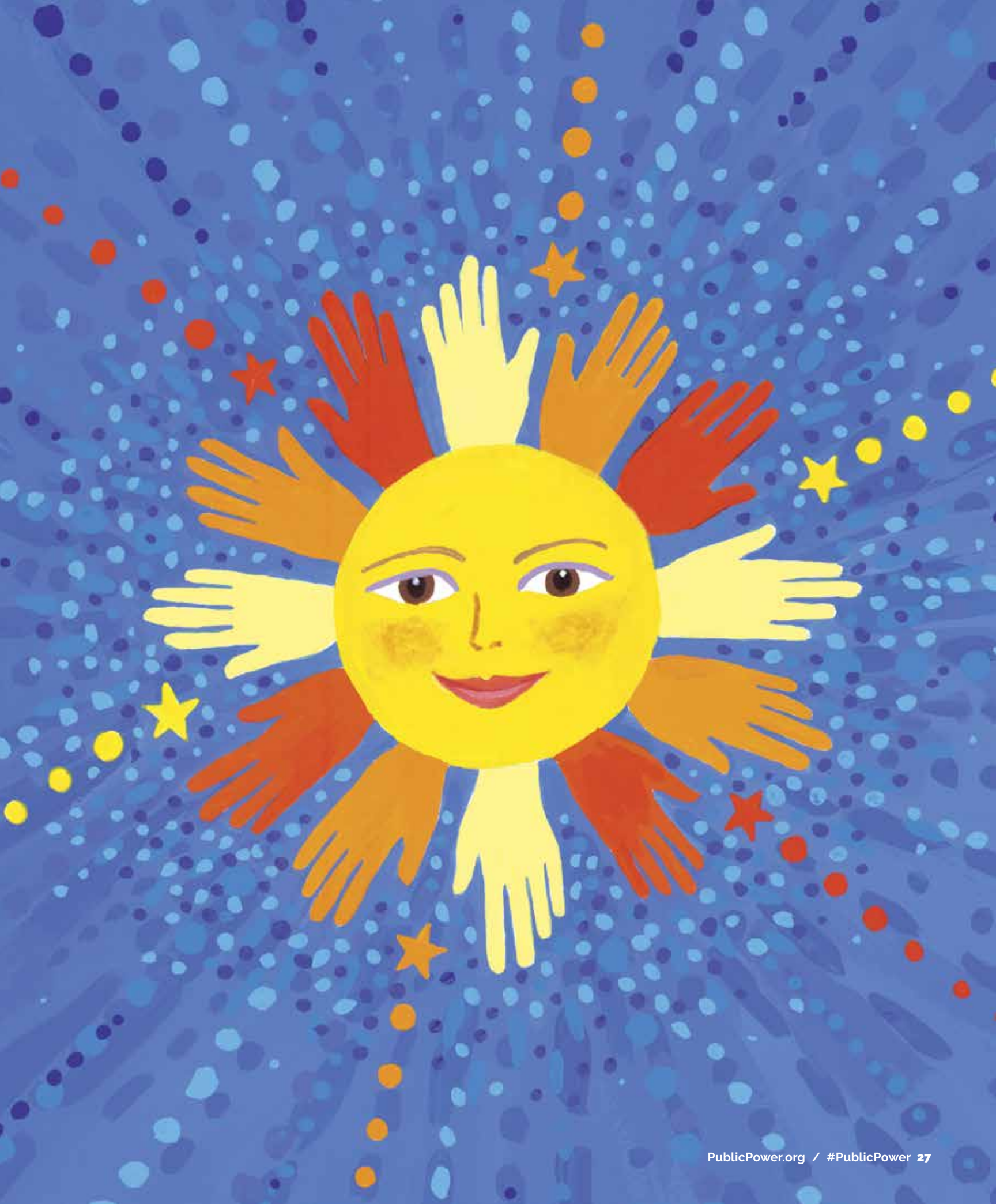
Therefore, WPPI helped its member utilities design three payment options. One option was full up-front payment. The second option had a lower up-front payment, along with on-bill financing. The third option — exclusive to income-qualified households — was on-bill financing with no upfront payment.

While regular customers would pay \$1.75 a panel per month for 10 years (with an up-front payment of \$250), qualified low-income customers would pay 90 cents a panel per month for 25 years (with no upfront payment). The subscription was limited to 10 panels per household. Robust transferability clauses were also worked into the subscriptions to address customer concerns.

“We designed it so the energy credits from the community solar program would always yield a net positive cash flow for these customers,” said Niemi. “We didn’t want to have any months where their bill would actually increase.”

WPPI’s financial analysis looked at energy production over the 25-year life of the community solar program and also on a monthly basis. The agency determined the net present value of utility as well as subscriber investments. It also factored in the costs of construction, financing, interconnection, system maintenance, insurance, marketing, and program administration. Grant money helped lower the cost, which increased access for income-qualified people without cross-subsidizations, explained Niemi.

Heeter observed that some states like Colorado are transitioning from requiring an individual project to have a certain percentage of low-income customers, to having a portfolio of projects with an overall percentage of low-income customers. In other states, like Massachusetts, said Heeter, “Everybody can save money from day one. Some of those contracts are starting to be shorter term, with easier in and out provisions. So they’re just more customer-friendly in general which makes them more likely to be adopted by low-income customers.”



Getting creative about funding

In fall 2019, Imperial Irrigation District, a public power utility in California, commissioned a 30 MW community solar project built by Citizens Energy. IID buys the majority of the project's output at about \$23 per megawatt-hour and Citizens contributes an additional 10MW through a unique agreement between the agencies.

The utility virtually applies a credit for a portion of the solar energy generation to all of its qualified low-income customers, who automatically see savings on their bill each month. Each of these 11,000 customers gets incremental savings of 2 cents per kilowatt hour and the savings are locked in for the 23-year duration of the program.

IID was able to get these prices because Citizens came up with a creative option. Citizens paid for about \$100 million of an \$1.8 billion transmission line that the nearby investor-owned utility, San Diego Gas and Electric, built partly in IID service territory. "Since about 2012, we've been earning profits from the transmission line and giving away about \$1.5 million a year to low-income ratepayers in the Imperial Valley," explained Smith.

Smith said it was easy to work with IID "because they're a public power entity, and they can be flexible and creative." Investor-owned utilities find it harder to offer simple programs and billing options, owing to regulatory constraints. IID leased its own land to Citizens to build the project and paid the interconnection costs.

Finding a solar developer that can complete a project as inexpensively as possible and then designating that output for low-income customers keeps costs down for the utility and makes the process easier for customers, who won't get multiple bills and can see the savings, according to Smith.

WPPI leveraged grants and incentives to build its community solar programs at the lowest cost to customers and also obtained in-kind assistance. The Association's DEED program, the Michigan Department of Agriculture, and the Department of Energy's SunShot program provided grants. The Western Upper Peninsula Planning and Development Region Commission, which does economic development work in the region, helped with grant writing and project organization. Michigan Technological University's social engineering department helped with the feasibility studies and analysis of results.

Avoiding potential roadblocks

Educating customers is critical as there is a lack of awareness about community solar and misconceptions about pricing. Niemi said that during the feasibility studies, the WPPI team encountered people who just did not think solar was going to work. They were also skeptical about who would benefit — the utility or the customers.

Heeter and her colleagues heard during stakeholder interviews that some customers were skeptical of the bill savings, especially if they're told they can save money from day one with no upfront payment. "People think 'it's too good to be true,' or that there's something in the contract that is not being presented fairly," she said. It's important to communicate how the contract is structured and help customers understand that bill savings are real.

Both Heeter and Niemi emphasized the power of local relationships. The social feasibility studies that WPPI conducted were valuable in this regard, said Niemi. "We didn't just want to build a community solar program for the community, we wanted to build it with the community. We helped the communities shape the program for us."

Heeter said if the solar developer is the one in charge of subscribing low-income customers, the developer should be working with energy efficiency organizations or nongovernmental organizations that help low-income populations. "Organizations that already have working relationships with the locals could sign them up for the community solar program. Hearing the message from a trusted source is important for customers."

Partnering with energy efficiency organizations also makes sense, suggested Heeter. "If you target homes that have been weatherized already as first pass for community solar subscriptions, then customers won't need to buy as large of a subscription because their homes are already efficient."

Another roadblock is figuring out how people qualify for low-cost solar programs, pointed out Heeter. "Can you use something other than a credit score to approve customers for solar programs? Metrics like utility bill repayment might be a better predictor of whether people will pay their community solar subscription."

There is no cookie-cutter design for a community solar program, cautioned Heeter. There is tremendous variation in state policies, the economics of solar, the underlying electricity bill structure, incentives, and energy assistance programs. Utilities thinking about a new program can't just say, "There was this good program in Massachusetts, so let's do that." Every program needs to be created with local context.

Niemi emphasized that engaging with the community is the most critical factor in the success of a community solar program. "As a utility person, I'm really good with poles and wires and electrons — the physics of a project. What really helped us was bringing in people that can figure out the feelings and emotions of the community members."

THE 20/20 VISION FROM THE TOP

A CONVERSATION WITH JOY DITTO AND SUE KELLY

In this Q&A from December 2019, the American Public Power Association's outgoing president and CEO, Sue Kelly, and incoming president and CEO, Joy Ditto, shared their thoughts on the leadership transition and what's in store for public power in the years to come.



What do you see as the biggest challenge for public power in the coming years?

SUE KELLY: I talked about three big challenges for public power in my last National Conference speech. The first is offering products and services that our retail customers will want to purchase, even if they don't have to buy from us anymore. We should be their preferred provider. To do that, we must incorporate new technologies and offer the array of services the community wants — quick access to customer information, whole home energy efficiency services, renewable energy and storage options, electric vehicle charging, time of use rates to send better price signals — you name it.

The second is cyber and physical security. We are improving on that front, but unfortunately so are our adversaries. We need to build a security culture at our utilities, just as we've done with safety, and have it permeate everything we do.

The third is climate change. Our customer base is changing and the political environment in Washington is changing. We need to understand where public power as a whole is on the policy issues, so we know what we can support in legislation.

JOY DITTO: Public power utilities have long had a close relationship with their customers, but they're still mostly pushing out electricity to those customers versus "having a conversation," operationally speaking. Each utility is going to have to decide what their customers want in this future "grid conversation" and how they are going to meet those needs. A modern grid gives us great benefits, including enabling that two-way conversation with our public power customers and enhancing efficiency, but it opens up risks as well. Utilities are deploying communications devices to understand what is happening at the edge of the grid at a more granular level and to maintain a high level of situational awareness. Those devices are only as safe, secure, and reliable as the network they are on. We can't have

a flexible grid without adding more communications devices to the grid, and those devices add cybersecurity risk — a risk that must be managed very closely over time.

Are there any ways you expect (or would like to see) the Association or public power overall to change in the next few years?

KELLY: We have a new generation of mayors, policymakers, employees, and customers. We have to tell the public power story to all of those groups. To the customers, so they understand what it takes for us to provide affordable, reliable, and environmentally responsible electric service, and all the benefits we bring to our communities. To the employees, because if they don't know why they are doing what they are doing every day, then they can't carry our message to the customers. And to our policymakers, because we want to make sure they understand the ongoing value we bring to them and their communities.

If our customers and policymakers don't know the value we provide, they can make very shortsighted decisions they may come to regret. We have seen instances recently where a new mayor or policymaker has proposed to sell the public power utility to pay for a one-time gain — parks, schools, roads, or pension funding. On the other hand, leaders and residents in other communities are taking notice that public power can help a community support its local priorities, provide revenue and jobs, and serve as a key economic development and community partner.

DITTO: There are many opportunities in the utility of the future to provide services that our member utilities' customers want. But we have to get ahead of other entities that may want those customers. We have to be "eyes wide open" to potential threats about who wants our customers. In so doing, we can create an opportunity — clearly articulating the benefits of public power so that we will be the obvious choice, hands down. Because if we have already

gotten ahead of the curve, if we're offering great service, then there's not going to be a question of how it's going to go. That's what I want for our members to be able to do, with the Association supporting those efforts nationally.

I want to continue to partner with our brethren trade associations and others in the industry, because the challenges we see about defining the utility of the future affect us all. Each utility type has different governance and accountability mechanisms, but in terms of operations and mindset, we're very similar. The more we can leverage each other's knowledge, the better. Expansion of those partnerships and deepening of relationships will be an important component of what I want to do.

What opportunities do public power utilities have for showing greater industry leadership?

KELLY: If you look at the number of communities considering municipalization — San Francisco; Pueblo, Colorado; Chicago; the state of Maine — you see that people are realizing community ownership of their electric utility can be a real boon. If the community has an agenda, e.g., to reduce carbon emissions, assure greater reliability, increase energy efficiency, or help low-income customers — we are there to help make that happen. We can help the community reach its goals. For example, there are many public power utilities working with their cities on smart city initiatives. That's because we are already there to help do it, as a community-owned utility partner.

DITTO: Public power utilities are closely governed at the local level. That local control gives us greater flexibility to convince our local governance about what we need to address our customers' needs. It's a great advantage for us to be able to make many of those decisions at the local level. Because public power utilities are close to their customers, they have great opportunity to deal with the changing expectations of their customers. If they're allowed to respond to

THE 20/20 VISION FROM THE TOP

their customers unencumbered by unnecessary or burdensome regulation or policy, public power utilities will meet their customers' needs. The Association's office is in the Washington, D.C. area, for a reason — we are here to ensure that when our public power members deploy their essential services, the federal government doesn't impose unnecessary barriers.

Joy, what are you hoping to address right away as the new leader of the Association?

DITTO: As an association, our members are most important. We can serve them best if staff is rowing in the same direction and understand what members' needs are. A big priority is meeting with every member of the staff to learn what the current focus is in their particular arena, understand how their work aligns with the Association's strategic plan, and identify where there are gaps. A parallel focus for me will be to meet with policymakers inside the Beltway and other key stakeholders, many of whom I have kept great relationships with over the years, but to whom I now need to reintroduce myself in this new capacity.

I want to find the appropriate balance between being on the road and in D.C. Therefore, I am limiting travel for the first 100 days of my tenure so that I can work with the staff on an assessment of our programs to ensure they align with our strategic plan and ensure we are deploying resources optimally to meet the members' needs. I will also consult with the Board of Directors and will see many of the members at the Legislative Rally at the end of February.

Sue, was there a particular accomplishment or milestone the Association achieved under your leadership that you are most proud of?

KELLY: When I took over in 2014, the Association had a negative net worth, and our (frozen) pension plan was substantially underfunded. My predecessor, Mark Crisson, made some very tough decisions to begin to address our fiscal problems. But we had to "stay the course" to get back to good financial health. With the help



of our Board, staff, and members, we did that. At this point, the Association has a positive net worth, a line of credit, and a fully funded pension obligation. I think we're in a sound position to support the membership for years to come. So, it is a good time for a transition.

Joy, what leadership qualities or organizational culture are you hoping to emulate/maintain?

DITTO: First I want to thank and applaud Sue for her leadership. She is brilliant, she understands the policy issues well, and she is a passionate advocate for public power. She is also an extremely ethical person. I certainly want to build on the financial strength that has been solidified under Sue's leadership. We are a not-for-profit association, but we are also a business — and we have to ensure that we are financially accountable to our members and viable now and into the future.

But I'm not expecting to fill Sue's shoes — after all, we definitely don't wear the same shoe size!

The mindset of working hard for our members has existed for a long time and will continue to exist. I want to build on that to create a culture of trust, accountability, collaboration, and transparency.

Sue, any leadership advice for Joy as she takes the helm as CEO?

KELLY: Stay nimble, stay focused, and be prepared to cope with whatever life and our industry throws at you. You will be like a cook with four different pots on the stove, any of which might boil over at any time. This job has tested me in ways I had not imagined and helped me develop skills and abilities that I did not know I had. It has been a wonderful ride.

If you go back to the Association's purpose and mission, it is all about helping our members be the 21st century, community-owned electric utilities of choice. We must constantly keep our eye on that ball. If we don't, our members will suffer and so will the Association.

Joy, you are very well-suited to take this challenge on. You know our members, have worked here, and understand the organization and the issues we face. You have run your own association, so have developed those leadership skills as well. I am confident I am passing the baton to the person who can run the next lap and wish you Godspeed as you begin your race.

SERVING RESILIENCE: SUPPORTING MILITARY INSTALLATIONS

BY **SUSAN PARTAIN**, SENIOR EDITOR AND
CONTENT STRATEGIST, AMERICAN PUBLIC
POWER ASSOCIATION







LEVERAGING EXPERTISE

According to Vince Guthrie, public works program manager at Fort Carson in Colorado, there are about 26,000 soldiers assigned to the Army installation. “Our population makes us the 14th largest city in Colorado. People think of us as a military site ... but we are also a home. We have everything that a regular city would have,” he said.

“My job here at Fort Carson is to ensure that we do have the energy we need to accomplish our mission,” said Guthrie. “It is a large part of our budget, and our energy use does have other economic and environmental implications.”

Guthrie noted that the installation has an average utility bill of about \$2 million per month, which he expected made it the largest customer for Colorado Springs Utilities. In addition to serving Fort Carson, the public power utility provides electric, gas, water, and wastewater services to a number of Department of Defense facilities within its service territory, including the U.S. Air Force Academy, Peterson Air Force Base, and the Cheyenne Mountain Complex.

Guthrie said that Springs Utilities delivers utility services up to the military installation, and then the Fort takes command of the services inside its gates. However, Fort Carson is looking at the possibility of having the utility take over some operations and maintenance of the system through an intergovernmental support agreement — a type of contract that public power utilities can use to work with military installations in their territories.

U.S. military facilities are a major presence in many communities, shaping the local culture and economy. Utilities serving areas with a strong military presence take steps to ensure that services — whether provided directly to the installation or to servicemembers and their families — align with the mission and needs of this population.

“Operating a utility system is not our core mission,” Guthrie said. But having the agreement in place allows Fort Carson to tap into the utility’s “expertise and cost-effectiveness in operating our systems.”

“They look to us to have the best trained operators and line people, equipment, maintenance, and practices,” said Aram Benyamin, CEO of Colorado Springs Utilities, adding “We have hundreds of training programs for our lineworkers, technicians, and engineers — we’re a 365-day, 24/7 utility that’s always improving. You cannot leverage that kind of expertise if it’s not your core business.”

Tapping into that type of expertise and economies of scale was also a key reason why Offutt Air Force Base in Nebraska decided to sell the electrical equipment inside its parameters to the Omaha Public Power District about 15 years ago, said Steve Sauer, manager for large commercial and industrial sales & service at OPPD. The base still owns emergency generation assets, and OPPD operates the distribution network.

This arrangement does pose some challenges for OPPD, mostly in terms of access. “Generally, we can drive up to our asset, and obviously we can’t do that with Offutt,” said Sauer. He explained that crews working to fix parts of the delivery system on base might undergo security clearance or might require an escort.



“Our military customers see us as the go-to utility. As a public utility, we make sure there are no barriers to information sharing – passing on technology and making sure we’re in sync with what they want to do.”

ARAM BENYAMIN

CEO

COLORADO SPRINGS UTILITIES

RELIABILITY, REDUNDANCY, AND RESILIENCY

When it comes to energy use, military installations tend to be focused on the idea of resiliency.

Steve Carr, key account manager for the Department of Defense accounts at Springs Utilities, said that this focus on resiliency is why the utility has explored options for the installations in its territory to add generation or battery storage.

Sauer explained that resiliency can include capacity and redundancy, but that each military installation has a broad view of what resiliency means. In the past few years, Offutt has experienced flooding and a tornado, and amid these weather events, Sauer explained, “they define the critical building to us and then we go from there.”

“A facility might not be critical in our definition, but if their airmen need to be available and if their families needed a place to go, base

leadership wants them to be able to come to work without those concerns. So, a child development center would become a critical temporary quarter for an airman’s family,” said Sauer.

Sometimes, resiliency is about maintaining the connection to the grid. “Microgrids are great for adding resiliency, but being an island is not a good solution,” said Guthrie. “It’s that connection that makes us resilient.”

“Innovation helps you get to resiliency. [Springs Utilities’] vision includes innovation, which aligns with helping the DOD and Fort Carson get where they need to be,” said Guthrie.

“Our military customers see us as the go-to utility. As a public utility, we make sure there are no barriers to information sharing – passing on technology and making sure we’re in sync with what they want to do,” said Benyamin.

A SUPPORTIVE CULTURE

With such a large military footprint in the city, serving the installations also means being able to serve and understand customers that might be military families or support staff for the installations. In Colorado Springs, Guthrie noted that Fort Carson only has the capacity to house about 30% of the families assigned to the installation at a given time.

Being supportive of active service members and their families is important for the Fayetteville Public Works Commission in North Carolina, said General Manager David Trego. The public power utility operates adjacent to Fort Bragg, which according to the US Army is the largest military installation in the world by population.

Trego said that while the public power utility does not provide electric service to Fort Bragg, the installation is an important part of the fabric of the area.

Although PWC serves power right up to the installation's limit, Trego said that PWC's involvement goes "way beyond" delivering power to that point. The PWC provides water to the installation, both areas are served by the same transmission lines, and both could be affected by a cyber attack or another threat in the area. He is a member of the area's military affairs council, which provides a means for two-way communication with the installation's garrison command. Staff make sure to communicate closely with liaison officers, so that they are aware of any policy changes or other key information that they can relay to servicemembers as they are assigned to or leave the installation.

Trego noted that having the strong military presence and being sensitive to the needs of customers who might be deployed or reassigned without much notice have helped the utility improve its overall customer service. For example, he explained that while many utilities might

have 5% customer turnover in a given year, the PWC's turnover rate is about 20% a year. Trego stressed that "Our ability to make sure we have that flexibility in place also impacts our overall customer service and has a benefit for the non-military customers."

"We offer as many payment options as we can to our customers. We have multiple ways that customers can pay bills, even if they are deployed or out of the area for a while," said Trego.

CLOSE, COMPLEX RELATIONSHIPS

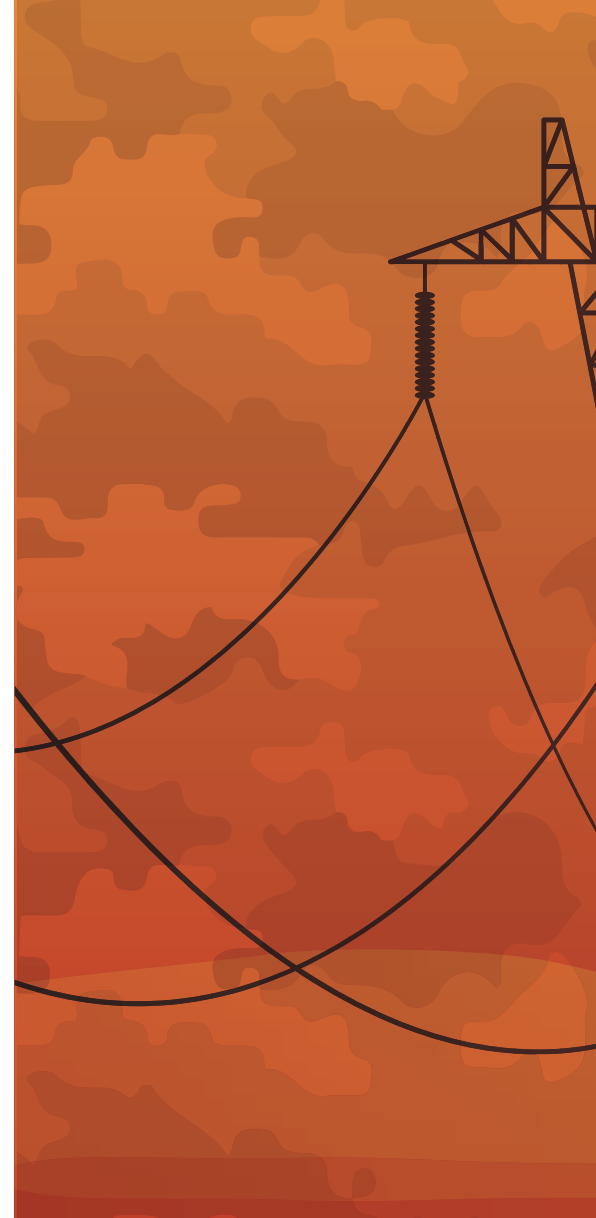
Military installations are also complex key account partnerships. The utilities interviewed mentioned the need for multiple layers of collaboration — including with local servicemembers and government leaders in Washington.

"Sometimes, when you are working with a base, you are not really dealing with the base — you're dealing with another entity representing the government," said Sauer. "We always try to make sure that the local leaders know what we discussed ... we don't want to leave local leadership out of the loop when talking to the federal arm."

Both OPPD and Springs Utilities mentioned that supporting military customers involves coordinating with staff from numerous departments and with different specialties, including government affairs and cybersecurity.

"[The relationship] is multifaceted, broad, and very deep," said Carr. Guthrie noted being in contact with Carr about every other day.

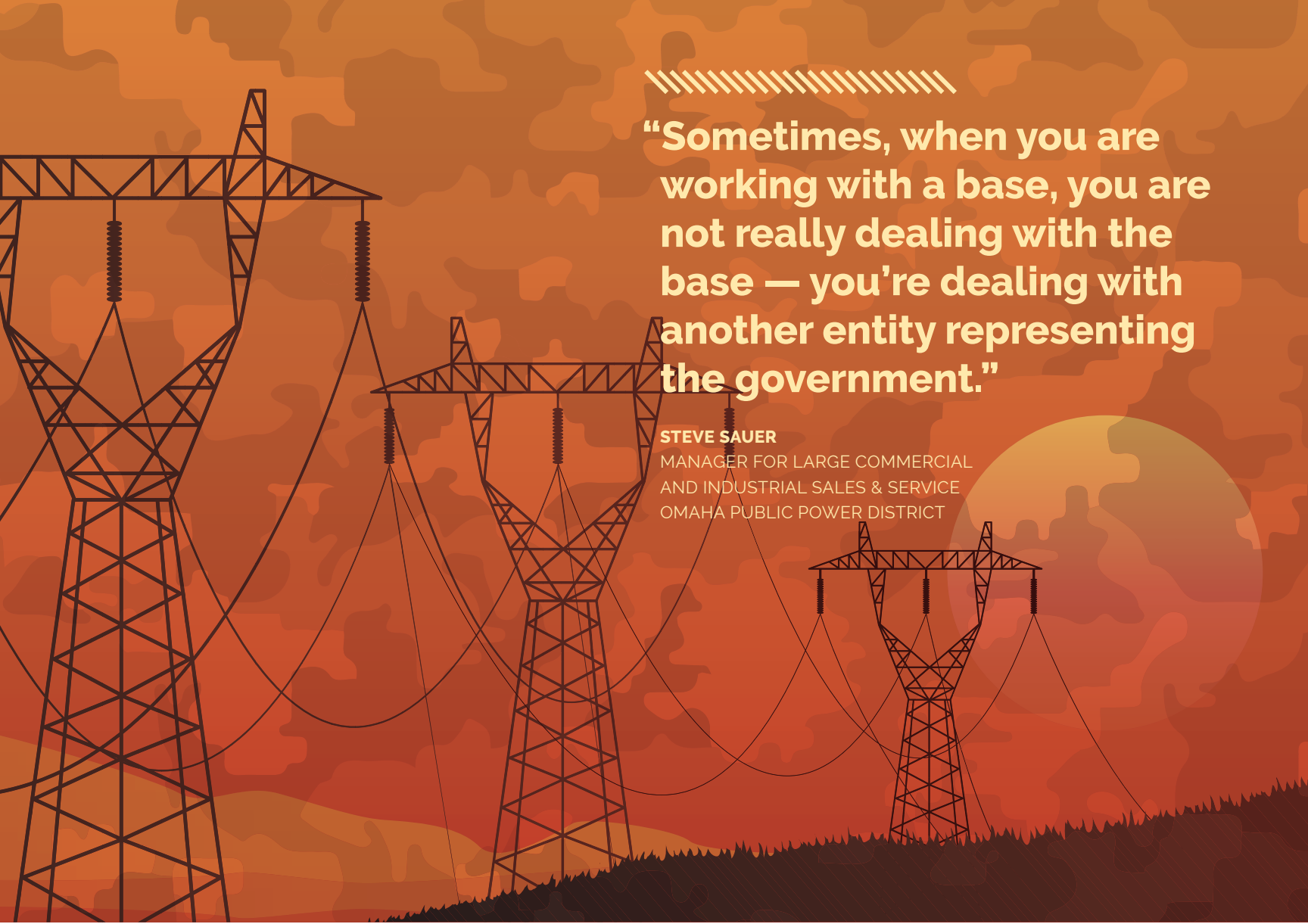
In Omaha, Sauer said the partnership began long before the utility took over ownership of the base's electrical assets. This strong partnership has been foundational to discussions about potential future directions and opportunities for the utility and the base.



"For any utility that has a military installation, it is critical to develop these relationships," said Sauer. "It helps to have an understanding of what their mission is, and listen to them." He said that the key account executive meets with the base minimally every week, which he said is closer coordination than the utility has with any other type of customer.

"We have a special relationship with them because of how much they bring to the community," said Seth Voyles, OPPD's manager of government relations. Beyond the key accounts representative, the relationship between the utility and the base extends into several parts of the community, including OPPD's and Offutt's senior leadership interacting in advisory committees.

Springs Utilities' Benjamin noted the importance of aligning long-term planning between the utility and its military customers so that each can achieve its mission.



“Sometimes, when you are working with a base, you are not really dealing with the base — you’re dealing with another entity representing the government.”

STEVE SAUER
MANAGER FOR LARGE COMMERCIAL
AND INDUSTRIAL SALES & SERVICE
OMAHA PUBLIC POWER DISTRICT

THE COMMUNITY ADVANTAGE

Being a public power utility means leaders and staff have more opportunities to interact with the community as well.

“Being a municipal, community-owned utility, what we’ve found is the focus is the community they serve. They don’t have a conflict with stockholder interest versus serving the community’s needs. [The Springs Utilities board] has always been supportive of our DOD presence here,” said Guthrie. Carr noted that about five members of Springs Utilities’ board of directors previously served in the military.

“An advantage we have is that we are not focused on profits — so we can focus on what is best for the installation and the community, period,” said Carr.

For Colorado Springs, that has meant a focus on boosting efficiency.

“There is good alignment in our priorities,” added Benjamin. “From conservation to efficiency to demand side-management — [we both want] to make sure that resources are used properly.”

Guthrie noted that the DOD has specific goals for reducing energy use, which has driven Fort Carson to take a number of steps to boost its efficiency.

“The least expensive and most resilient resources are the resources we don’t use,” said Guthrie.

Since 2007, Guthrie noted that the installation has reduced its energy intensity per square foot by 27%. He attributed this success in part to strong support from the utility in the form of energy audits and rebates and in getting certifications. Guthrie believes that Fort Carson has one of the highest concentrations of LEED-certified buildings in the U.S., with 80 buildings on the installation.

Guthrie pointed out that another benefit for utilities to work with DOD facilities is that both share a long-term financial outlook, and the DOD is considered a low-risk financial customer, which helps with utility bond ratings.

How Accessible Are Your Utility Communications?



Your facilities might have a ramp for wheelchair access. You might have a customer service phone line for people with differing hearing or speech abilities. But how easily can your customers with visual, hearing, or other challenges access your website or other materials? Here are a few areas to consider to make it easier for all of your customers to engage with you.

Website

- Are pages designed to be responsive — e.g. do they resize for different screens and translate well in both portrait and landscape mode?
- If users resize text, does that cause any functionality to be lost?
- Do images and text have sufficient contrast?
- Can visitors access all site functions using a keyboard?
- If any elements of your site flash or have animation, how easily can visitors turn off or pause these items?

Bills and bill pay

- Do any payment instructions rely solely on a visual element (e.g., click the green button to proceed or the red one to cancel)?
- Do any CAPTCHA blocks used allow for alternatives to accommodate different sensory perception needs?
- If users can get timed out, do they have an easy option for extending their time on the page (e.g., pressing the space bar)?
- Do form fields have descriptive labels?
- How easily can users verify and correct information before finalizing payment?

Outage maps

- Do any outage maps have a descriptive heading, title, and alternative text?
- Does the map, and any overlaying text, have high enough contrast with all elements? Would it render in black and white, or be readable by someone with colorblindness?
- Does the map rely on colors, or are there other elements such as symbols or textures that can convey meaning?
- Can data from the map be accessed in a different format, e.g., downloaded as a spreadsheet?
- Do users need a mouse to navigate the map, or can they use the keyboard?

Social media

- Do posts use a lot of emojis that break up the text, or would a customer using an assistive reading device get your message clearly?

Documents

- Do all PDFs make the full content of the document available to a customer using an assistive reading device? This includes having tags throughout the document, setting a logical reading order, and adding descriptive text for any images or charts.
- Is the reading level at or below the 10th grade?

Images

- Do images (or other non-text items) have alternative text? Alt text should be descriptive and transferable so that users can change the text into other forms (e.g., braille or speech).
- Are images and graphics high contrast or able to be ignored by assistive technology?

Video/Audio

- Do all audio/video elements have captions or text available?
- Do videos have synchronized descriptive audio?
- Can background noise in audio be avoided or turned off?

Learn more about Web Content Accessibility Guidelines www.w3.org/WAI/fundamentals/accessibility-intro/.



Affordability: It's the Bill, Not the Rates

BY PAUL ZUMMO, DIRECTOR OF POLICY ANALYSIS, AMERICAN PUBLIC POWER ASSOCIATION

Public power utilities have a long history of being able to offer low electricity rates to customers.

Over the past decade, as many costs have come down across the industry, we have continually seen the difference between public power, cooperative, and investor-owned utility residential rates shrink. In 2018, for the first time in a long time, we did not have the lowest average bundled rate. Our residential customers' rates are 11% less than those of residential customers served by IOUs, but cooperative residential customers had rates that were 1% less than ours.

Does this mean we're no longer able to claim that we're more affordable? No.

To repeat a longtime industry mantra, "Customers pay bills, not rates." What ultimately determines the bill is how much electricity our customers use.

Public power customers use about 20% less electricity than co-op customers in a given month.

	Investor-Owned	Cooperative	Public Power
Average rate per kilowatt-hour	\$0.1347	\$0.1181	\$0.1195
Average kWh/month	855	1,175	933
Average monthly customer bill* (extrapolated)	\$115	\$139	\$112

* Does not include fixed customer charges

The chart above shows how this extrapolates to continued overall savings for our customers. Extrapolated over an entire year, the average cooperative residential customer pays about \$324 more for electricity than the average public power residential customer.

There are a few reasons why residential customers of public power utilities use less electricity than those of rural electric cooperatives. Public power utilities emphasize energy efficiency more

Customers pay bills, not rates.

than cooperatives, according to data from the U.S. Energy Information Administration. On the flip side, cooperative customers often have more electrified end uses, in part because they live in more remote areas of the country.

Electric use also varies from region to region. In the South,

electricity use tends to be higher because of increased demand for cooling and because more homes use electricity to heat their water and homes.

As more public power utilities promote electrification, this average usage could change, again shifting our relative cost. Overall, public power can continue to help our customers save by guiding them on how they can use energy more efficiently and get the best value from their utility.

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UTILITY & LEADERS
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