MAY-JUNE 2025 • VOL. 83 / NO. 3

PUBLIC POWER MAGAZINE

AMERICAN PUBLIC POWER ASSOCIATION

MANAGING GROWTH

OKONITE

YOU CAN'T RUSH QUALITY

Can you really afford to cut corners on the lifeline of your facilities?

Okonite Cables offer premium wire and cable solutions tailored for various industries, including utilities, renewable energy, and rail and transit systems. As a pioneer in EPR technology with its Okoguard insulation, the company proudly boasts a remarkable legacy as a trusted manufacturer of durable and dependable electrical wiring solutions.

Our extensive product lineup, coupled with advanced engineering expertise and a commitment to quality assurance, positions Okonite Cables as the preferred choice for demanding applications.

Each length of Okoguard cable embodies the legacy of our 147-year-old company and the dedication of its Employee owners. They take pride in the exceptional quality and unwavering reliability of our products, ensuring that every cable contains the quality you have come to expect from Okonite.

THE OKONITE COMPANY

102 Hilltop Road
Ramsey, New Jersey 07446
201.825.0300 www.okonite.com

Okonite Cables...A higher Standard!

MADE IN THE USA
QUALITY CABLES SINCE 1878

Introducing the APPA Academy Online

Quality training, accessible anywhere

Enhance your industry knowledge with online courses, webinars and summits that make learning easy. The same high-quality training you expect in convenient, cost-effective formats.

COURSE: How Data Center Demand and Artificial Intelligence Affects Power Grids
May 13 & 15 | 3.5 hours each

COURSE: Electric Vehicles and the Utility: Opportunities and Challenges
June 3 & 5 | 3.5 hours each

SERIES: Leadership Fundamentals for Managers and Supervisors
July 10 – 31 | 4 sessions, 2 hours each

- Understanding Your Leadership Brand
- Unlocking Motivation Through Focused Goal Setting
- Giving Constructive Feedback that Drives Development
- Creating Teams that Solve Problems

SERIES: Overhead Distribution Systems
May 21 – Sept. 4 | 11 sessions, 4 hours each

- Overhead Distribution Systems Principles & Applications
- Best Practices in Overhead Line Design

SERIES: Accounting Fundamentals
Sept. 16 – Nov. 5 | 9 sessions, 3.5 hours each

- Public Utility Accounting
- Electric Work Order & Fixed Asset Accounting
- Advanced Public Utility Accounting

SERIES: Cost of Service & Rate Design
Sept. 17 – 25 | 4 sessions, 3.5 hours each

- Basic Cost of Service & Key Financial Targets
- Strategic Rate Design: Trends and Distributed Generation Impacts

COURSE: Underground Distribution Systems
Sept. 23 – Oct. 2 | 6 sessions, 4 hours each

SERIES: Powerful Strategies for Leaders
Oct. 16 – Nov. 6 | 4 sessions, 2 hours each

- Tapping the Power of Influence
- Unlocking the Power of Collaboration
- Harnessing the Power of Collective Problem Solving
- Building Resilience for Change

Learn more at www.PublicPower.org/APPAAcademy

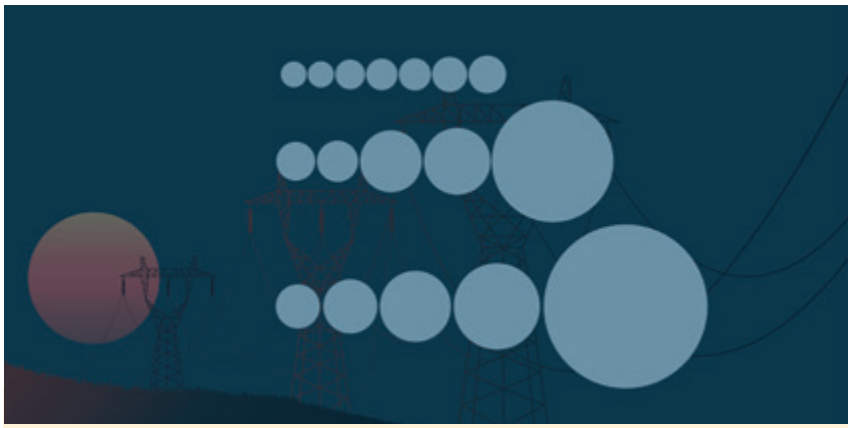
AMERICAN PUBLIC POWER ASSOCIATION
Powering Strong Communities

Cover photo courtesy Provo Power, Utah

PUBLIC POWER MAGAZINE

MAY-JUNE 2025

MANAGING GROWTH



Editor in Chief
Susan Partain

Managing Editor
Adam Patterson

Design
Julio Guerrero
Sharon Winfield

Contributing Writers
Lisa Cohn
Scott Corwin
Betsy Loeff
Latif Nurani

INQUIRIES

Editorial
News@PublicPower.org
202-467-2900

Subscriptions
Subscriptions@PublicPower.org
202-467-2900

Advertising
Justin Wolfe, Justin.Wolfe@theygsgroup.com
Advertising is managed by The YGS Group.

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.

Periodical postage paid in Arlington, Va., and additional mailing offices.

For permission to reprint articles, contact News@PublicPower.org.

AMERICAN PUBLIC POWER ASSOCIATION
Powering Strong Communities

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 the federal government to protect the interests of the more than 54 million customers that public power utilities serve, and the 96,000 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.

Postmaster, send all address changes to:
American Public Power Association
2451 Crystal Drive, Suite 1000
Arlington, VA 22202

Managing Growth in the New Energy Landscape

BY SCOTT CORWIN, PRESIDENT AND CEO, AMERICAN PUBLIC POWER ASSOCIATION

Photo courtesy City Utilities of Springfield, Missouri

Across the U.S. there are consistent themes to the top-of-mind issues facing public power leaders — workforce, supply chain, increasing costs, permitting delays, and, in many areas, the challenges around growth. The questions are varied: how to spur, control, predict, or plan for it, and how to manage growth once it is imminent?

While growth in most areas has been moderate — around 1 to 2% per year increase in sales or customers — some communities are grappling with faster double-digit growth and development along with all the associated challenges (see the graphic on page 20). While there can be many benefits for local jobs, economic and community development, and a boost in franchise fees and taxes, there also are an array of considerations around power supply, interconnection, system operations, investment cost and risk, ratemaking, and impact to the local community.

This issue of *Public Power* magazine explores how public power utilities are approaching and managing issues related to various types of growth. Some utilities already are positioning their utilities to be attractive to data center customers while others want to know more about what to expect in working with those unique customers (see page 6). Some public power utilities are exploring how to keep up with booming populations or increasing customers (see page 12). And still others are working across their communities to make sure their infrastructure is ready to handle increased electrification of transportation, buildings, and other end uses (see page 26).

In an uncertain domestic and global economy, the rate or consistency of growth can hinge on many factors that are difficult to forecast or control. This includes policy both at the state level and in the federal realm, where APPA advocates to promote reliability and affordability for public power in availability of financing and around impact of federal regulation and permitting. Issues related to load growth are a central focus of discussions at the Federal Energy Regulatory Commission (see page 36), where APPA is engaged to shape the rules that may affect our members. Utility plans, project costs, and timelines will continue to be affected by ongoing supply chain constraints and uncertainty in international trade issues (see page 32). Meanwhile, generating capacity development pushes ahead (see page 40) to meet the clearly climbing demand.

We hope you enjoy and gather insights from the stories about growth in this issue. If you have a story or project that you think your colleagues would value hearing, please reach out to me or anyone on our news team at News@PublicPower.org. And, for more opportunities to learn, please remember to check for new virtual or in-person opportunities at PublicPower.org/APPAAcademy, and at our National Conference soon in New Orleans. See you there!

ndustrial

Help customers electrify without breaking your grid

Ndustrial provides grid-responsive electrification projects for large energy users.

We install and manage beneficial electrification infrastructure projects that typically do NOT require major utility upgrades, such as:

- Electrification of refrigerated trailer fleets (TRUs / reefers)
- Electrification of terminal tractors (switchers / yard goats)
- Electrification of short-haul and drayage fleets

ABOUT NDUSTRIAL

Ndustrial provides software and services to help the $60B industrial market combat inflation and climate change by optimizing energy intensity — the crucial metric of energy, emissions and cost required for one unit of production. By uniting production data with energy usage for some of the most complex, energy-demanding operations in the world, Ndustrial's AI-powered solutions enable smarter energy decisions in real time.

The company has helped customers like Lineage, ABB and W.L. Gore avoid over $100M in energy spend to date. Learn more at ndustrial.io.

Contact Ndustrial to help industrial ratepayers electrify in ways that benefit the grid

Contact: BusDev@ndustrial.io

NEW DATA CENTER IN TOWN
CAN YOU CARRY THE LOAD?

BY BETSY LOEFF,
CONTRIBUTING WRITER

Photo courtesy City of Batavia, Illinois

Data center load growth has tripled over the past decade, with a sharp increase in the past few years, and the U.S. Department of Energy expects it to double again by 2028. Meeting this load growth is going to be a challenge. Here are a few things to consider when companies are evaluating whether to build new data centers in your community.

HERE, THERE, AND EVERYWHERE

First, recognize that data center load isn't solely a concern for larger utilities. The city of Batavia, Illinois, serves more than 26,000 residents and businesses in a community west of Chicago. Communities surrounding Batavia are served by ComEd, which has invested heavily in upgraded transmission and distribution infrastructure over the past 10 years. This has helped meet the transmission requirements of nearby data centers, while the ample water from Lake Michigan is brought in to cool their servers.

Due to the closeness of surrounding communities, what Batavia doesn't have is much open space, which has limited the kind of data centers that can be built within its confines.

"We don't necessarily have 50-acre parcels available or even 20-acre parcels where someone could build a campus with multiple buildings," explained Steve Allen, P.E., Batavia's electric superintendent. "We still have niche or boutique-type data centers that have reached out to us, centers in the 20- to 50-megawatt range." So far, Allen noted, no data center has decided to locate in Batavia.

Regardless of megawatt capacity, Allen noted that companies looking to build data centers invariably start with the same question: "How much power can we get, and how soon can we get it?"

Answering that question comes down to modeling, a task that's a balancing act between the data center's actual consumption, what regulators will accept as a load forecast, and what utilities need to do for resource adequacy, said Kathleen Hughes, assistant director of resources procurement, management, and customer engagement for Silicon Valley Power in Santa Clara, California.

Hughes has abundant experience forecasting the needs of new data centers. SVP is a 700-MW utility, and 92% of that power goes to commercial and industrial accounts. About 60% of them are data centers.

According to Hughes, data centers sometimes add significant margin to their projected power demand — claiming they require 50 MW while only using 35. As an additional concern, she said it has become challenging to plan out artificial intelligence data centers due to their often-unpredictable load ramps. "We work with our customers every year and try to get a good picture of what they're doing so we can plan our resources properly," she said, adding that planning is a demanding task. "Our engineers model, model, model, and as soon as something is done, it's outdated."

"Companies looking to build data centers invariably start with the same question: "How much power can we get, and how soon can we get it?"

STEVE ALLEN, ELECTRIC SUPERINTENDENT,
CITY OF BATAVIA, ILLINOIS

> **"The data centers are not in the power business, and they tend to want a partner around or have generator partners on the property."**
>
> **PAUL SAFERSTEIN,** SENIOR ADVISOR FOR DATA CENTERS, **ASCEND ANALYTICS**

A new substation under development in Santa Clara, California. Photo courtesy Silicon Valley Power.

DOWN TO THE WIRES

Capacity isn't the only concern when it comes to planning new data centers. "Speed is paramount," said Paul Eory, director of energy analytics solutions at Ascend Analytics. Most data centers are seeking to be operational in a two-year timeframe, he explained. In addition to speed of deployment, data center operators tend to see emissions and cost as other top priorities.

Compared to those demands, supplying power can be a relatively straightforward aspect of serving data center load. "There are some pretty big technical challenges that we need to think about," Allen said. "What impact does a data center have on the overall load of the city? What does our infrastructure look like where they want to site their facility within our utility territory? What does our interconnection back to the transmission system look like? Do we need to perform any upgrades?"

Batavia has undertaken the modeling needed to address these questions, while the city's water utility has engaged in similar evaluation when considering how much water will be needed to cool data servers.

Batavia's models show the city can accommodate currently planned data centers. What remains uncertain is how this might run against future electrification that spurs load growth. "If I've got a peak load around 85 MW, a data center who wants 50 MW when they get to town, and our interconnection is only good for 150 MW, that puts us close to our margin for growth. Batavia would need to start talking to ComEd about getting additional capacity from the transmission system to serve future load," Allen noted.

Eory said there's no time like the present to start looking at these issues, especially since interconnection and new construction can take years to complete. In a world where customers are hoping to see their facilities built and open in a couple of years, proactive planning could pay off.

Photo courtesy City of Batavia, Illinois

"Capacity studies can take months, and those months are eating into this two-year timeline," Eory said. He recommends that utilities start looking at their systems and modeling those what-ifs, e.g., "What if we put hundreds of megawatts here?"

He also recommends that utilities work with their transmission providers in advance to find out if they have capacity nearby, which will allow planners to best anticipate data center load when new sites become operational. "That's the physical line capacity side. After you've figured out if you have physical capacity, get creative or consider partnering with procurement experts who can help you figure out the best way to supply the energy," he said.

"The traditional integrated resource plan [IRP] and procurement process that many utilities or their joint action agencies go through can take, at minimum, a year for an integrated resource plan and then another year to go procure," Eory said. "You've gone through the two years already."

He noted that utilities can abridge that process to six months by combining the IRP and procurement plan into one effort. Instead of sending ad hoc estimates of renewable asset costs, storage costs, or thermal costs, he urges clients to feed bids into an IRP in real time. That way, utility managers can say, "Here's how I would meet that growth, starting with transmission line capacity, and then moving into what generation or behind-the-meter options are available."

Paul Saferstein, senior adviser for data centers at Ascend Analytics, noted that behind-the-meter options can include microgrids. "There is enough demand from the data center side that some are interested in figuring out if the campuses can come off-grid and self-power," he added. "That said, the data centers are not in the power business, and they tend to want a partner around or have generator partners on the property."

Saferstein explained that theoretically any on-premise generation can power a so-called microgrid. "In the holistic sense, microgrids should be seen as a 24/7 power island where you don't need to interconnect."

Another solution some data center operators are starting to consider is non-firm power from the utility — power that can be curtailed when necessary — that would be paired with behind-the-meter energy storage, Saferstein added.

MONEY TALKS

In Santa Clara, planning is underway to increase local transmission capacity. "It's a $400 million undertaking," said Nicolas Procos, chief operating officer for SVP.

With new data center load coming online, SVP expects to grow from a 700-MW utility to a 1,200-MW utility in the early 2030s. To meet that load growth, Procos says the utility is targeting upgrades to receiving stations — the interconnections to the bulk electric system — in addition to 50 MW of battery storage within city limits and a new 115-kilovolt line.

> **"Whether it's property taxes without all the city services and cost, or what they do for the general fund through our energy sales, focus on the value data centers bring."**

KATHLEEN HUGHES, ASSISTANT DIRECTOR OF RESOURCES PROCUREMENT, MANAGEMENT, AND CUSTOMER ENGAGEMENT, **SILICON VALLEY POWER,** CALIFORNIA

Photo courtesy Silicon Valley Power.

In this case, residential customers will not end up shouldering the cost of new grid infrastructure. "One rate class can't subsidize another rate class," Hughes noted.

She added that assigning extra costs may be easier in California than in other states because legislation allows utilities to charge fees related to the cost of serving a customer. When a utility must add a substation dedicated to a large data center, that data center is on the line for its cost.

SVP also has a mechanism that enables utilities to charge large customers upfront for improvements driven by new loads, Procos said. "It's what we call a load development fee, and we update it every year," he explained. If system upgrades include the replacement of aging assets and the expansion of capacity, the cost winds up being split between existing and future customers.

Another way utilities are getting data centers to pay for necessary upgrades is through take-or-pay rates. "Historically, data centers reserve and sell capacity to their customers, and they sell 100% capacity factors, but you might only get 60% in terms of true load," Saferstein said. "Now, minimums are coming where the utility says, 'We'll deploy that $10 billion, but make sure 85% of that is guaranteed take-for-pay usage — i.e., cost recovery — and that gets baked into the contract pricing.' All of a sudden, data centers are having to charge customers or pay more for underutilized capacity."

"The devil is in the details on agreements with data centers," Procos said. "Our new ones have a ramp rate. If the agreement says the center will use 50 MW, we say, 'OK, we'll give you that over time.' Maybe they'll start out at 15 MW, then move to 20, then 25, and so on. We know they're not going to show up and go straight to 50 MW. This helps us model our system better and understand the impacts."

Regardless of the challenges presented by load growth and infrastructure development, Hughes said utilities should keep in mind the public benefits that data centers provide. "Whether it's property taxes without all the city services and cost, or what they do for the general fund through our energy sales, focus on the value data centers bring," she said. "Make sure you're communicating those benefits to your community."

OMS

Proven to power through the most significant storms, Milsoft OMS assures your staff and customers will have all their tools available when needed most.

WEATHER

Live Weather Layers: Powered by DTN® for Milsoft Outage Management system, your operations staff will be able to see live weather layers on top of your system map.

COMMS

Automated customer communications & services, two-way texting, and web outage viewer for customers!

MOBILE

FieldSyte® gives users the power to see the live status of your system, work outages and assessments, ping meters, and much more, all from a tablet or phone.

MILSOFT®
Utility Solutions

TAKE ON YOUR WEATHER EVENTS WITH MILSOFT'S OUTAGE MANAGEMENT SYSTEM

Contact us now to learn more or schedule a demonstration.

Providing Powerful Software for Power Systems Professionals Since 1989.

Engineering Analysis • Outage Management • GIS & Field Engineering • Automated Customer Services • Enterprise Accounting & Billing • Financial Management • Work Management

www.milsoft.com • 800-344-5647

Supporting More People
How Utilities Keep Pace with Customer Growth

BY SUSAN PARTAIN, DIRECTOR, CONTENT STRATEGY, AMERICAN PUBLIC POWER ASSOCIATION

Public power utilities are seeing growth in customers that slightly outpaces the overall growth in U.S. population. Since 2014, the number of total customers of public power utilities has grown 2.24 million. When accounting for the typical number of people each residential customer serves, that's more than 55 million people across 49 states and five territories served by a public power utility, or about 16% of the total U.S. population.

More than 70% of public power utilities have grown their customer base over the last decade, with the median utility seeing 7%

Photo courtesy City of Lehi, Utah

growth in customers from 2014 to 2023. Given how small some communities served by public power are, what might seem like a drop in the bucket for a large utility could represent significant expansion for another. For example, the utility serving the town of La Grange, North Carolina, grew by about 400 customers, which represented a 28% increase. By comparison, CPS Energy, which serves the city of San Antonio, Texas, saw growth of about that many customers per week over the same time frame.

Handling this degree of population change requires adapting the utility to new demand, expectations, and culture.

"Anything that our crews want to do to learn and grow, we really try to support them in doing that because we're going to need them in the future, and they are a vital asset."

JOEL EVES, POWER DEPARTMENT DIRECTOR, **CITY OF LEHI,** UTAH

Proactive and Deliberate

The city of Lehi in Utah has been in a period of booming growth. Since Joel Eves, power department director for the city of Lehi, started 12 years ago, the utility has gone from serving just over 15,000 meters to roughly 32,000 meters today. Along with the growth in population, Eves said the peak demand has increased about 5 megawatts per year and overall sales have gone up 5-7% annually over the past 20 years.

Eves said parts of the movie *Footloose* were filmed in Lehi in 1983. The movie depicted a small, rural community. Since then, the nature of the community has changed along with the rapid growth.

While historic town buildings harken back to its farming roots, such as the prominent mill used in the movie, the growth has been fueled by an influx of technology companies. Eves said the area has been coined "the silicon slopes" due to the concentration of tech companies that call the city, which sits south of the Salt Lake City metropolitan area, home.

The growth has meant that Lehi has had to be very "proactive with infrastructure," noted Eves, which has included building a substation every two years over the last 12 years. This development isn't just about serving the load of the new companies and the people they bring, but in meeting the new expectations of a different type of customer.

Back when the community was more rural and agricultural, Eves said the utility could perform maintenance on parts of the system that might require a planned outage of an hour without giving advance notice. Now,

Photo courtesy Lehi City Power Department

Elevating the Industry Standard

Since 1952

As a trusted name in the utility industry for over 70 years, Tallman Equipment delivers unparalleled service through our dedicated team of employee-owners who provide knowledgeable and efficient solutions to even the most unique challenges.

Quality, convenience, and reliability are the pillars that Tallman stands on to maintain our reputation as an industry leader in tool sales, rental, repair, and more. We don't just sell tools; we sell Tallman.

That's the Tallman way

Equip your crew today

877-860-5666

tallmanequipment.com

WWW.TALLMANEQUIPMENT.COM
TALLMAN
EQUIPMENT CO., INC.
877.860.5666
EMPLOYEE OWNED

the utility has to be more thoughtful about the effects and duration of any such work.

"The demographic of the customer we have is a technology-type person that relies on broadband services. We have to make sure that we're a lot more careful when we're having outages — it's just changed the culture."

Eves said there has been a deliberate approach to adjusting the culture within the electric department to adapt at a more sustainable pace. "Although we've had a lot of new people, we've done everything we can to support the people we have," he said. "Anything that our crews want to do to learn and grow, we really try to support them in doing that because we're going to need them in the future, and they are a vital asset."

That has included keeping utility growth in check relative to the community growth. "I have not wanted to base our employee growth off just simply infrastructure growth, because that could stop and I don't want to have to ramp down and lay people off," said Eves.

In comparing Lehi's operating and maintenance expense per customer, as detailed in APPA's Financial and Operating Ratios of Public Power Utilities report, Eves noted that the department's metrics fall well within the first quartile for its size and region. Department employees have discussed this strategy as a team, and Eves noted that team members were on board with the need to work a bit harder to keep up.

"Don't grow too fast, you don't know what tomorrow is going to bring. Put those dollars into training and into those tools to do a good job. We have our processes figured out, and our team is amazing. The hard thing is finding new resources," said Eves.

To overcome the challenge of finding new power supply, Lehi built a 22-MW natural gas-fired peaking plant that allows the city to access its own generating capacity or dispatch it to others. Even with that plant in place, Eves said Lehi continues to look at every option it can for resources, and works with Utah Associated Municipal Power Systems to procure supply and determine when to run the plant.

Eves doesn't see the pace of growth slowing anytime soon. One of the tech companies with a larger presence in the city has plans that would expand its workforce by another 800 people.

"Because we've been so proactive, we are out far ahead enough we're doing well," said Eves. While the utility infrastructure is keeping pace, he said the utility is looking to secure more peaking generation as well as baseload resources.

"We've proactively worked hard when we know a big development is coming," he said. That has meant working with an expanded pool of suppliers when ordering materials, getting to know the developers, and being willing to take risks and order materials in advance. For the last part, Eves said the utility has grown its warehouse "substantially", which has helped overcome some supply chain challenges.

"We have a lot of material needs. Our partnerships are what helped us get through the difficult times," he added.

The city has been able to support new infrastructure through impact fees, which allow the utility to allocate a portion of projects to new developments. Eves said that means that as new community members come in, the infrastructure created to support them is covered by the new customers, so longtime residents don't subsidize the cost.

Minimal Effects from Big Change

The town of Thatcher, Arizona, has seen moderate growth in its population the past decade, but its community-owned electric utility experienced significant customer growth as the town opted to take on all customers within the city limits, a portion of whom had been served by a neighboring cooperative.

Heath Brown, Thatcher's town manager, said the town council had always had the authority to claim any residents living within the town limits as customers, so when town leadership decided to bring all residents in, it wasn't a complex nor lengthy legal matter to do so. Rather, they wanted to be thoughtful about how the move would affect customers and the coop.

Since the agreement took effect in 2016, Thatcher has seen its number of customers rise from about 1,400 to nearly 3,000.

The town made sure to give ample notice to customers who would be moving from the coop to the public power utility at the time of the switch, including through public meetings and in sending letters. Brown said that from the customer point of view, the change was not difficult, as it helped them to feel that they were fully part of the town and would see immediate benefits in terms of lower costs and getting their deposits back.

"We had nearly zero complaints from the switchover," he said. In addition to lower costs, the change also meant the newly added customers would have fewer bills to manage, since the town consolidates various services into one bill.

Eastern Arizona College's middle campus. Photo courtesy Town of Thatcher, Arizona.

"The easy part was we have really low rates. They were all going to see a decrease in their electric bill. So that was painless for them," he added. In 2023, Thatcher's average revenue per kilowatt hour was 16% lower than the coop's.

The town wanted to minimize the effects on the utility staff and the coop and so worked out an arrangement where the coop still handles system maintenance for a monthly fee. Brown said the contract meant the coop didn't have to lay off any employees, and the town didn't need to take out a loan to fully pay for the added portion of the system.

"Bringing in all of the town has made us feel reunited and all citizens on an equal playing field," said Brown.

"Bringing in all of the town has made us feel reunited and all citizens on an equal playing field."

HEATH BROWN, TOWN MANAGER, **THATCHER,** ARIZONA

Brown said there are areas where the two still have to figure out as they arise, such as which entity is responsible for getting the necessary permits from the state when power lines need to be relocated or other improvements need to be made. Brown said it is a careful balance between making sure the coop is fairly compensated and the town doesn't feel overcharged for the work.

Brown said having the whole town included as customers makes projects easier to develop and implement. Thatcher has been moving to automated meters and is in the process of building a new substation, which will ultimately replace the current one in operation.

"Having the larger customer base helps keep our funds with enough balance to do these kinds of things when needed," said Brown.

Looking ahead, the town is developing two 5 MW solar arrays that will help support future growth. The town of 5,500 people is near a large copper mine that is looking to expand. While the mine itself is not a utility customer, Brown said a lot of the town residents work at the mine, and its expansion could add 5,000 people to the area in the next ten years.

Brown is optimistic that current plans and projects will keep the utility in a good position over the next decade. He credits the town's involvement with the Southwest Public Power Agency in helping Thatcher to plan for the future and better hedge against changes in energy prices, such as when the cost of natural gas spiked following the winter storm in February 2021.

"We are unique in that our electric system is only one part of everything we do with the town. When you look at our overall budget, electric is one part of the whole picture. That gives us a little flexibility in years where there's higher needs with the electric part of it, we can subsidize it, and we can transfer money out of the electric fund if we have another need within the town."

Energize the future with us.

Electric Power Engineers is your partner in:

- **Integrated Grid Planning**
- **Distribution Planning & Grid Modernization**
- **Electrification**
- **Digital Transformation & ENER-i Software Solutions**
- **Transmission Planning & Operations**
- **Distribution Design**
- **Energy Market Analysis**
- **Engineering & Project Management**
- **NERC & Regulatory Compliance**

Discover how EPE's expertise can support public power utilities in their mission to build a more sustainable, reliable energy future.

HOW PUBLIC POWER IS GROWING

Public power utilities are growing — serving more people in their communities and seeing electric sales increase. From the Pacific Northwest to the Gulf Coast, spanning larger metropolises and rural towns, utilities are seeing increases spurred by local development, electrification initiatives, and the construction of new data centers.

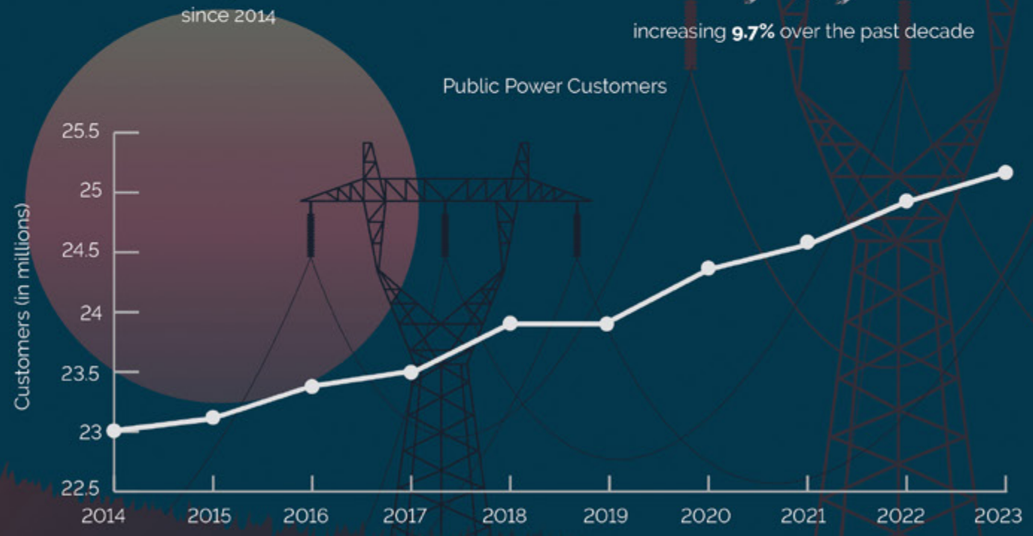
SERVING MORE PEOPLE

U.S. population grew by an average of

since 2014

Public power customers grew an average of

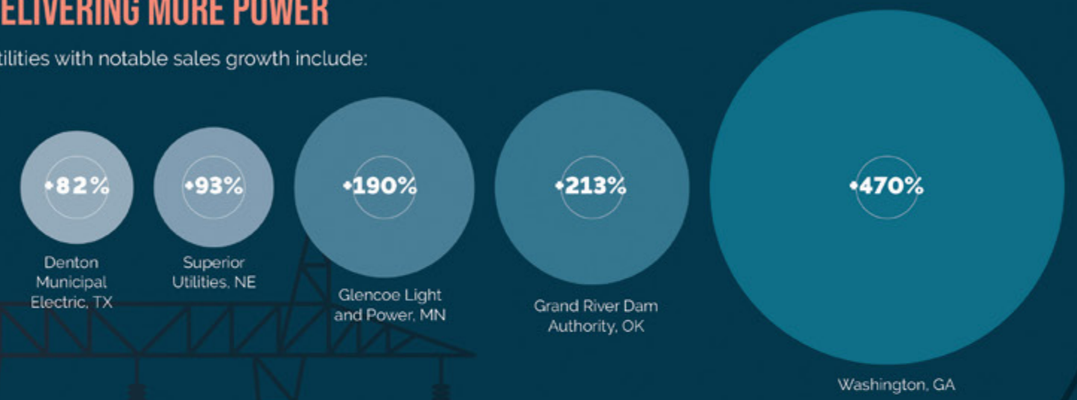
increasing **9.7%** over the past decade



Cities and towns with significant customer growth since 2014 include:

DELIVERING MORE POWER

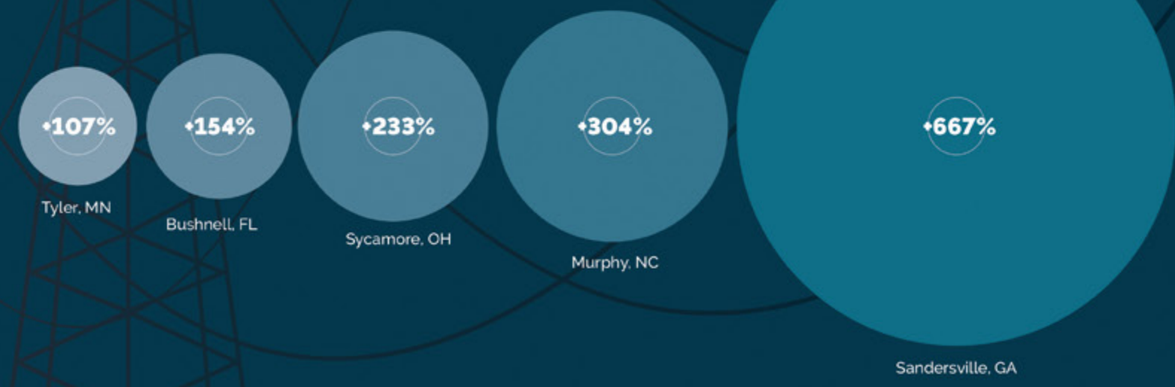
Utilities with notable sales growth include:



PUBLIC POWER UTILITIES SAW AN AVERAGE 2.1% INCREASE IN SALES SINCE 2014.

POWERING DATA

The construction of data centers has produced a corresponding demand for electrical power. Sales increases have been especially pronounced in areas whose output now supports AI and high-speed computing.



The Power of the Right Partnership for Public Power Utilities

The changing energy landscape, along with the growing demand for reliable and affordable power, means that public power systems are playing a pivotal role in shaping the energy future for local communities by investing in new infrastructure and clean energy technologies.

Public power utilities want a knowledgeable partner to assist them with proven solutions for grid modernization, integration of new and emerging technologies, proactively planning for future demand changes, and improving reliability and resiliency.

Each public power organization's journey will differ. Wesco's deep expertise in the utility industry allows us to take a holistic approach to help you take advantage of growth opportunities and address your unique power delivery requirements.

Reliability

When it comes to reliability, public power utilities are staying ahead of the game by proactively working to harden their distribution system and embracing the use of emerging technologies to boost and prioritize dependability for their customers.

For over a century, Wesco has had a similar commitment to our customers and operational approach. Wesco believes in forging strong business partnerships that involve collaboration and problem-solving to deliver solutions that solve challenges for public power utilities and the communities they power.

Expertise

To meet the increasing consumer demand and expectations there is a need to enhance operational efficiencies, stimulate businesses, and accelerate the use of technological advancements. That's where Wesco comes in. With decades of experience in the public power sector, Wesco can leverage our expertise in electrification, renewables, energy storage, 24/7 connectivity, and automation to address power delivery challenges.

In today's market, it is tough for public power utilities to have internal expertise in all areas. Wesco can deliver innovative solutions, best practices, and technologies that address the specific challenges that public power utilities of any size are facing.

For more information on Wesco Utility Grid Services, please visit www.wesco.com or reach out to gridservices@wescodist.com.

Supply Chain Solutions

Our comprehensive and customizable supply chain services enable you to focus on delivering essential services to your customers while we take responsibility for the management of your entire project, or a portion of it.

- Asset and materials management
- Complex program and project management
- Logistics and transportation optimization
- Sourcing, procurement and forecasting
- Supplier selection, consolidation and coordination
- Work order release management

Automation

Advanced Metering Infrastructure allows public power utilities to rapidly address grid deficiencies, supports grid automation, allows improved management of utility assets, provides enhanced security, and results in a more efficient and reliable grid while laying the foundation for future technology needs.

As utilities are transforming their operations to meet increasing energy demands and environmental objectives, Wesco stands ready to help them optimize performance, achieve smarter operations, and navigate the electric grid of the future.

24/7 Connectivity

A modern smart grid requires 24/7 reliable and secure communications to ensure that critical applications have real-time connectivity and to stay in touch with field crews in remote locations.

Through our extensive and diverse technology portfolio, Wesco assists public power utilities in harnessing the full power of next-generation communications networks by offering:

- Critical connectivity experience and expertise
- Innovative solutions to support mission-critical operations
- Broad portfolio of connectivity and IoT solutions to address industry demands
- Technology integration and deployment
- Single-point-of-contact management

Electrification

Electrification gives communities a path to reach their decarbonization goals, lower overall emissions improve the way of life for residents. It is also transforming a variety of sectors including transportation, residential and commercial buildings, industrial processes and equipment, and agribusinesses.

To meet the energy needs of an electrified future, utilities must upgrade or replace aging infrastructure, enhance grid reliability, incorporate renewable energy sources, add energy storage solutions, and increase smart grid capabilities, while at the same time maintaining safe, reliable, and resilient electric grids. While modernizing the grid is complex, Wesco can help Public Power utilities meet rising power demands, address sustainability goals, and lower operating costs.

wesco


Connect
Customized
AMI Solutions
Wesco's customized advanced metering infrastructure (AMI) solutions deliver a holistic approach for improving utility operational efficiencies, security, and resilience.
wesco
We build, connect, power and protect the world.
Wesco.com/utility-technology

Public Power Leaders: **Jennifer Freeman**

Jennifer Freeman has served as the electric director at Griffin Power in Georgia since 2020. She joined Griffin Power in 2018 after working for other city departments for more than two decades, including as a planner and an administrative coordinator. Under her leadership, Griffin Power has been working on modernizing Griffin Power's grid, implementing its first outage management system, which has led to marked advancements in both quality of service and downtime response. Freeman has been a dedicated supporter of the Griffin-Spalding Chamber of Commerce and is actively engaged with public power entities across the state, including MEAG Power and Electric Cities of Georgia. She is a recipient of the 2025 Mark Crisson Leadership and Managerial Excellence Award from the American Public Power Association.

HOW DID YOU COME TO WORK IN PUBLIC POWER?

I started as a city employee in 1996. The bulk of my career had been in planning and development, and I thought my career might eventually lead me to being the director of planning and development. Then, in 2018, our marketing operations manager departed to work for Electric Cities of Georgia. The electric director at the time approached me and asked if I felt that I would be a good fit for that position. I had a lot of institutional knowledge but no electric background except for my first few years working in customer service. I was nervous at first but incredibly grateful for the opportunity, where I worked with our key accounts and was a back-up for the electric director on the operations side. I worked in that role for a couple of years, and in 2020, the director's position opened.

I've loved my career in the electric department — it's been my passion, and I've been lucky to work with such an awesome group of people all around. If you love what you do, then it's not really a job. It's your passion, and that just makes it that much better and easier to come to work every day.

WAS THERE AN IMPORTANT LESSON OR SOMETHING UNEXPECTED TO FIND WHEN YOU CAME TO WORK FOR THE UTILITY?

It was a breath of fresh air. I love the city of Griffin. I was born and raised here, so it's always wonderful to give back to the community that raised you. It's a different group of folks in this industry overall. Everybody is exceptionally kind and wants to help one another.

We had five tornadoes hit our community in 2023. And to see all the people that stepped up — not just community leaders, but through the mutual aid partnerships that we have with other public power providers

as well — was amazing. We had 180 lineworkers come in from various places all over Georgia and even some from Alabama. Everybody came in and was willing to help and work 16 hours a day without complaining. This industry as a whole has taught me the goodness of people.

HOW HAS A BACKGROUND IN CUSTOMER SERVICE SHAPED YOUR PERSPECTIVE ON LEADING THE UTILITY?

I think it has been very beneficial. We're here to serve the people, that's just the bottom line. Service has to be your platform. At the end of the day, that's what you need to be successful in public power. My group as a whole helps in every way that we can.

It's important to remember that human capital is your most important asset. If you don't care for your people, you're never going to be successful. It all comes down to how you treat them — keep them safe, give them the tools they need to work efficiently, and value them. And let them know that you value them. That should be your top priority, always.

WHAT PRIORITIES DOES THE CITY HAVE RIGHT NOW AND IN PLANNING FOR ITS FUTURE?

We're very proud to have implemented our outage management system, since we're one of the few municipalities in Georgia that have a full OMS. It used to be when there was a storm that came through — the phones are ringing off the hook and you're taking notes on sticky notes. It was chaos. Having an OMS has streamlined that. It's very manageable now. People just want to know that you're aware their power is out, and now they can view the map and see that their area is marked.

We are also shopping for a new advanced metering infrastructure system that will integrate seamlessly with our OMS so that everything communicates with each other. We want real-time data flowing in a way that improves all systems. We've got a pilot program that's budgeted for this fiscal year, and we're trying to get that rolled out to be implemented by June 30. We want to include as many customers as possible so that we can get solid feedback as to how it works with our broader system.

We're also in the process of putting out an RFP for a new SCADA system, with the goal of integrating the AMI, OMS, and SCADA.

People don't invest in a community if they don't see it being successful. Griffin is seeing tremendous growth — residential, commercial, and industrial — and moving forward in a positive trajectory. We have several new subdivisions finishing out and coming online. We've got quite a bit of new multifamily development, as well as apartments and a hotel in the pipeline as well as some commercial growth.

WHAT DO YOU THINK MAKES FOR A SUCCESSFUL LEADER OF A PUBLIC POWER UTILITY?

Trust your people and don't micromanage. It's also important to not be intimidated when somebody knows more than you. Instead, build off of that and value their knowledge. I have a line construction superintendent that's an expert in his field. I try to give him the tools he needs to work safely, efficiently, and effectively, but I try not to step into his lane and tell him how to do his job because I don't know what makes that operation run best — he does. This applies to every division in my department.

I have a great team here, but I try to never micromanage them. I just give them the resources they need and let them flourish.

The Griffin Power team. Photo courtesy Griffin Power, Georgia.

Charging Forward

How Public Power Is Supporting Electrification

BY LISA COHN, CONTRIBUTING WRITER

While U.S. electrical demand had been relatively stable from the turn of the century into the 2010s, a combination of a booming need for data centers alongside the electrification of transport and industry is driving a new era of load growth. According to a recent study from the National Electrical Manufacturers Association, U.S. electricity demand is expected to rise 2% annually, reaching a 50% increase against current levels by 2050. Increased use of electricity for vehicles and industrial equipment is expected to take a larger share of the overall predicted growth through 2050, overtaking expected load growth from data centers after 2035. The study predicts smaller growth for residential and commercial electrification.

For public power utilities, these increases present both challenges and opportunities. On the one hand, utilities are looking to incentivize customers to embrace electric vehicles, heat pumps, distributed generation, and other technologies that will change their electric usage. On the other hand, public power utilities are focusing on ways to manage changing demand by offering EV charging programs and rebates for energy-efficient equipment.

Discovering Planning Priorities

Certain utilities, like Kaukauna Utilities in Wisconsin, have a surplus of available power that makes these initiatives easier to accommodate. "We're not pinched for power," said Michael Avanzi, Kaukauna Utilities' general manager. "If we had a big data center come in, we would welcome that. It's a good load for our system."

Two other public power utilities, Sacramento Municipal Utility District in California and Lakeland Electric in Florida, are planning for demand increases, especially related to transportation electrification.

For SMUD, customers switching from gas to electric heating alone would be less arduous because the demand for heat does not usually

Photo courtesy Kaukauna Utilities, Wisconsin

coincide with typical hours of peak grid stress, said Rachel Huang, director of distributed energy solutions at SMUD.

Electric vehicles, however, are expected to increase demand in Sacramento. Several years ago, SMUD started researching where customer adoption of EVs would occur within its distribution system. More recently, SMUD conducted detailed analysis of the grid implications of vehicle electrification, at the light-duty, medium, and heavy-duty vehicle levels to continue refining its planning considerations.

At the light-duty level, SMUD examined transformer loading with the presence of multiple electric vehicles to predict the locations of the most immediate grid stress points. "That allows us to really target areas where we think we may need to change out our transformers," Huang said. SMUD also used both metered EV charging data and vehicle telematics data to understand diversified load profiles with consideration of managed EV charging to inform transformer sizing.

For medium- and heavy-duty vehicles, SMUD surveyed its top 100 commercial customers to understand their vehicle fleet electrification goals and identify possible clusters of demand from EV charging on the distribution grid. The utility also analyzed opportunity areas where there is available capacity to support commercial fleet vehicles.

Promoting managed charging is a core component of SMUD's strategy for meeting load growth from EVs. Notably, the utility has been running a managed charging pilot with BMW, Ford, General Motors, and Tesla, and is planning a larger-scale managed charging program based on its findings.

In addition, SMUD implemented time-of-use rates to encourage EV owners to charge during off-peak hours. The utility offers a discounted rate for any home electricity usage between midnight and 6 am. Under that rate, EV owners receive an additional 1.5 cents per kilowatt-hour discount, Huang said.

"The message is not that we don't have to do any grid upgrades due to electrification, but SMUD has been taking a very methodical and analytical approach to give us some scenarios and do some planning ahead."

Lakeland Electric, the third largest municipal utility in Florida, is also working to address electrification in its community. One of the utility's biggest concerns is transportation electrification, especially electric 18-wheelers, said Mike Dammer, manager of emerging technology at Lakeland Electric.

Similar to SMUD, Lakeland oversaw a study into future EV adoption. The analysis projected the utility will add between 20 MW to 30 MW of load related to EVs within 15 years.

"We can watch those trends and know what our load growth will be and integrate it into resource planning," said Dammer.

When companies look to electrify transportation, Lakeland Electric works with them to understand how the utility can best serve the load.

For example, Amazon sought to convert its local fleet to EVs. To help meet this goal, Lakeland Electric held talks with the company about deploying 311 EV chargers. Part of this effort involved asking Amazon

Rep. Doris Matsui (seated, left) shares a joyful moment with Norma Canas, whose home received comprehensive electrification upgrades through SMUD's Neighborhood Electrification Project. This initiative, part of SMUD's broader electrification efforts, demonstrates how utilities can make clean energy transitions accessible to all community members. Photo courtesy SMUD.

"We can watch those trends and know what our load growth will be and integrate it into resource planning."

MIKE DAMMER, MANAGER OF EMERGING TECHNOLOGY, **LAKELAND ELECTRIC,** FLORIDA

to site the chargers at a different location than the company had initially planned so that Lakeland Electric would not have to change existing infrastructure.

"We wanted to make sure there was capacity for transformers and substations when you're putting in 311 chargers," said Cathryn Lacy, marketing manager for Lakeland Electric. "We would have had to add miles of conductor if Amazon chose the first location."

Residential load growth is another challenge that Lakeland Electric's planners are rising to meet. The region was ranked second in U.S. residential growth from 2022–2023, and to meet this demand, the utility now offers rebates to customers who purchase efficient appliances and air conditioning systems.

The utility has sought to incorporate personal power generation within its load mitigation plans, as Lakeland Electric fields 20 to 30 requests per month for residential solar. Its customers can now enroll in a net billing arrangement under which the utility pays them for any excess solar they

PERMACAST

Protecting America's Critical Infrastructure Since 2006

PRECAST CONCRETE WALL MANUFACTURER




- **Data Center Walls**
- **Retaining Walls**
- **Privacy Walls**
- **Screen Walls**
- **Ballistic Walls (Level 8 & 10)**
- **Security Walls (CIP-014)**
- **Sound Barrier Walls**
- **Tall Walls (60+ Ft)**

Contact us to **Schedule a Lunch & Learn**

Scan here To Learn More

www.permacastwalls.com | sales@permacastwalls.com | 888•977•WALL

SMUD is a recognized industry leader and award winner for its innovative energy efficiency programs, renewable power technologies, and sustainable solutions for a healthier and electrified future. Photo courtesy SMUD.

"The message is not that we don't have to do any grid upgrades due to electrification, but SMUD has been taking a very methodical and analytical approach."

RACHEL HUANG, DIRECTOR OF DISTRIBUTED ENERGY SOLUTIONS, **SACRAMENTO MUNICIPAL UTILITY DISTRICT,** CALIFORNIA

send to the grid. Lacy noted, though, that Lakeland Electric still prefers solar producers use this energy to help reduce demand and line losses.

Along with focusing on residential customers, Lakeland is running a pilot that provides energy use information to commercial customers. If these customers examine their aggregate data, they might be able to determine, for example, whether a loading door open on a hot summer day is increasing the need for air conditioning.

"We're trying to be a trusted energy adviser for residential, commercial, and industrial customers," Lacy said.

Getting Ready

Kaukauna Utilities sees electrification as a net positive. This has been supported through the launch of a beneficial electrification and environmental responsibility plan that encourages a transition toward clean electricity and the use of zero-emission generation. About 45% of Kaukauna's energy mix is renewable, and with nuclear resources included, the utility's generating mix is 60% from clean energy sources.

While its customers have been moving toward electrification gradually, Kaukauna's planners expect this to pick up in time. "It's a little slow, but we believe it's not a matter of if, but when electrification will occur," Avanzi said.

The utility expects customers will first buy EVs, which will be followed by building electrification. Kaukauna Utilities' expects electrification to occur because it will be beneficial, which means that three criteria will be met: Heat pumps, EVs, and other products will make economic sense for the customer, they will be reliable, and they will provide environmental benefits.

Over the last five years, 45 customers have taken advantage of Kaukauna's EV charging rebate — 32 of them in the last two years. Thirty customers have used the heat pump rebates, and 25 have installed rooftop solar using rebates. The utility also offers incentives for smart thermostats and funding for energy saving improvements like insulation, air sealing, and efficient appliances.

"When our customers electrify, we want homes to be energy efficient," Avanzi said.

To help lower peak demand — including from EVs — Kaukauna Utilities began a new time-of-use rate in 2024 that gives customers a 40% discount for consuming electricity between midnight and 5 am every day. The rate includes three tiers, with on-peak from 3 to 7 pm on weekdays and standard rates applying at other times.

Under a time-of-use rate created prior to these 2024 measures, on-peak rates were applicable from 8 am to 8 pm. About 70 customers are signed up for that rate, and many are expected to switch over to the new one.

"This new rate gives customers more flexibility and options, more times to use energy, and less time paying for on-peak," he said.

In another effort that is expected to help meet demand and enhance system resilience, Kaukauna Utilities is planning a utility-scale microgrid at a substation that supplies electricity to about 6,000 customers, or about 40% of its customer base. If a transmission line supplying this critical substation goes down, the microgrid, in conjunction with three hydroelectric plants, could help the system ride through the outage and continue to serve those customers.

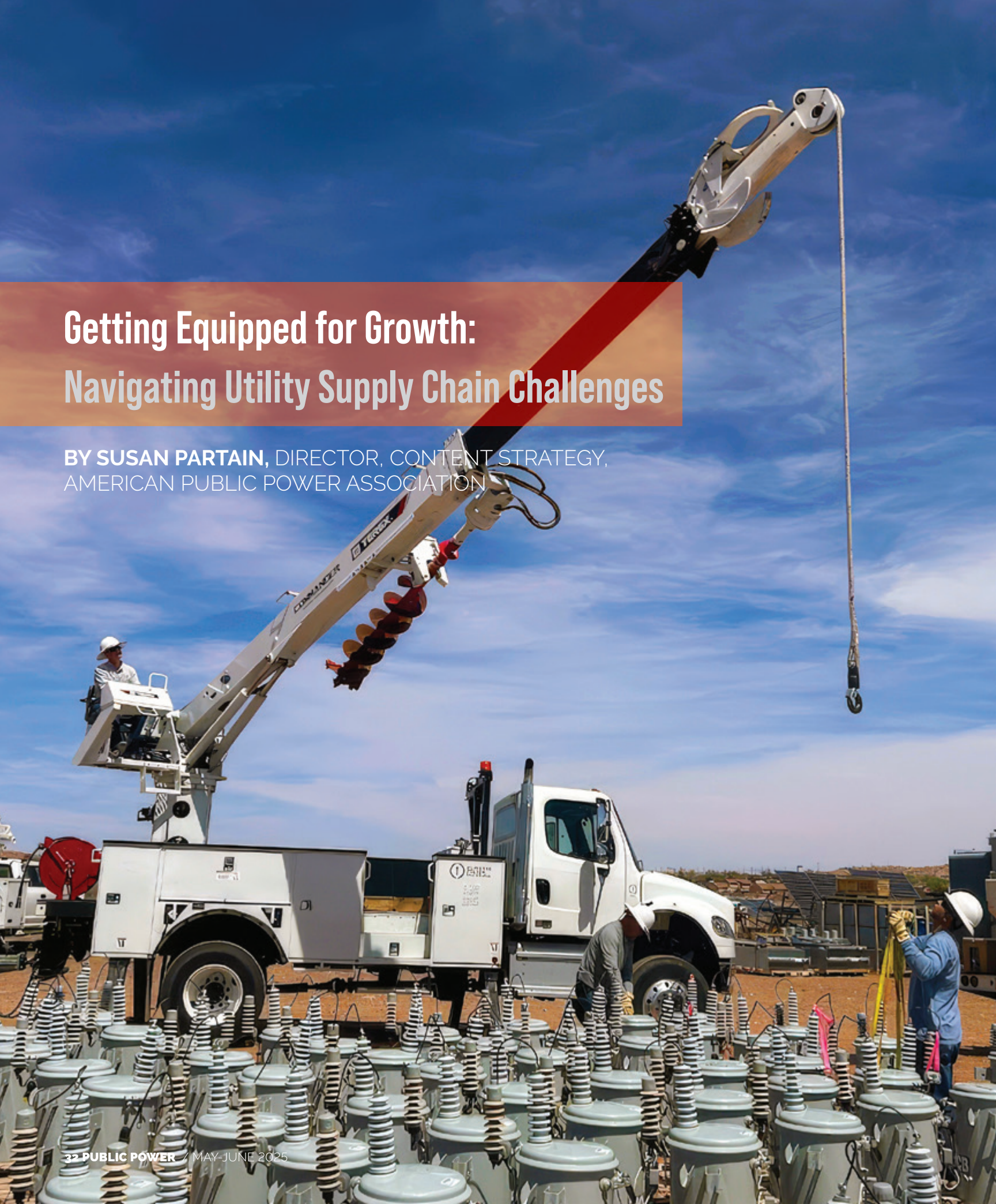
While electrification has been incremental, Kaukauna Utilities expects these incentives to provide value for both commercial and residential customers.

"Electrification will be a win-win for everybody," Avanzi said.

Solar panels outside Kaukauna Utilities' office. Photo courtesy Kaukauna Utilities, Wisconsin.

Getting Equipped for Growth:
Navigating Utility Supply Chain Challenges

BY SUSAN PARTAIN, DIRECTOR, CONTENT STRATEGY, AMERICAN PUBLIC POWER ASSOCIATION



As many talk about the need to grow and develop more electric infrastructure, uncertainty in the global and domestic economy is making it difficult for utilities to plan and support this growth. Years after the COVID-19 pandemic put strains on the supply chain for a host of equipment and materials, utilities are still grappling with how to bring down long lead times on critical equipment and keep project costs from fluctuating.

Areas experiencing growth are under specific pressure to both catch back up with supplies and expand to meet new demand. Utility plans, project costs, and timelines will continue to be affected by ongoing supply chain constraints and uncertainty in international trade issues. To help, utilities are looking at ways to expand their pool of trusted vendors, increase warehouse capacity, and partner with other utilities where possible on purchases.

Stocking Up

"There continues to be a high amount of demand for the materials that we use, and there continues to be an imbalance between supply and demand, which is resulting in high rates of inflation and also long lead times," said Jaren Broadbent, director of purchasing services for Salt River Project in Arizona.

"The forecast in SRP's strategic plan is unprecedented growth," said Steve Lopez, senior director of supply chain and flight services for SRP, who said the public power utility is preparing to essentially double its capacity in the next 10 years. That kind of development is going to translate down the line to an increase in demand for everything a utility needs, "So we in supply chain need to be positioned to support that growth," he added.

SRP anticipates that most of the load growth in its area will come from industrial customers. The Phoenix metropolitan area has been among the fastest growing areas in the U.S. over the past few decades, but Lopez said SRP is seeing some indicators that the population growth rate is slowing.

Broadbent said he monitors measures such as the Global Supply Chain Pressure Index to get an indicator of how utility purchasing might be affected in the coming months.

That index showed how across all industries, supply chain pressures were greatest in 2021 and 2022, when effects from the COVID-19 pandemic had the most disruptions to all kinds of sectors. While the general markets started getting back to normal by 2023, Broadbent said the same hasn't held true for utility supply chains.

"While there has been noticeable improvement, we are continuing to encounter disruptions in the industries that support our operations," said Broadbent. "We're competing against a lot of other utilities and entities for the same materials, which is driving up the demand."

Recent uncertainty around tariffs has added another layer of difficulty in planning to know what materials might be more challenging, or more expensive, to come by.

"The market is constantly changing, creating uncertainty. Today, it might be tough to get ahold of panels, tomorrow it might be something different. It's not just one thing, that's the biggest challenge," said Broadbent.

"It's a very dynamic environment. It's changing, and so our strategy has to deal with that uncertainty and with the changing landscape in the global supply chain," said Lopez.

That strategy looks at continuous improvement in four areas, Broadbent said, that position relies on four pillars: people, processes, technology, and data. "It's basically around building multiple safety nets, because as one safety net breaks, it's important to have a backup safety net to help ensure continuity of supply."

> **"It's a very dynamic environment. It's changing, and so our strategy has to deal with that uncertainty and with the changing landscape in the global supply chain."**
>
> **STEVE LOPEZ,** SENIOR DIRECTOR OF SUPPLY CHAIN AND FLIGHT SERVICES, **SALT RIVER PROJECT,** ARIZONA

SRP's Investment Recovery Department and Transformer Shop aim to refurbish or repurpose used parts and have helped significantly, said Broadbent.

The groups include skilled technicians and engineers that have extended the life of many critical materials, which has helped alleviate some of the disruptions SRP has experienced. "As a transformer gets removed from the field, it'll get returned to the transformer shop, they'll test it, they'll determine whether or not there's any potential life left in that asset, and if there is, they're able to refurbish it, rebuild it, and return it to stock. And that's been a huge safety net for us," explained Broadbent.

Another important component is to leverage analytics and internal reporting mechanisms to communicate material status to internal stakeholders and to optimize inventory. "It helps us to be more proactive and forecast where we're sitting, where we have healthy stock, and where we might be seeing issues," said Lopez.

This communication extends to its suppliers. Lopez said that SRP's systems are integrated with some key external suppliers so that the utility can have visibility into the stock of critical materials, and suppliers have insight into SRP's stock on certain items.

"With that additional visibility and information, we're able to collaborate closer, and ensure that we have the materials that we need within SRP's warehouse, and also it helps the distributor to ensure that they have the materials that they need to support us," added Broadbent.

While these strategies have helped SRP see some supply chain issues lessen, Lopez said the situation for materials continues to be dynamic. He hopes to see quoted lead times become more stable again, among other factors.

Forging New Partners

Janet Lonneker, assistant general manager for electric services at Anaheim Public Utilities in California, touched on the supply chain concerns the public power utility is facing on an episode of the *Public Power Now* podcast in October 2024.

The utility has been experiencing a lot of growth and is focused on making a variety of capital improvements, especially ahead of the 2028 Olympics, as Anaheim will be hosting some events in its venues. Some of the major efforts Lonneker said the utility is taking on include upgrading capacity and undergrounding more of its system, which is already more than 60% underground.

Lonneker said that supply chain issues have been a major challenge for the utility, particularly in the last three years. While Anaheim is one of the larger public power utilities, serving 126,000 electric meters, it is a much smaller utility than its neighboring investor-owned utilities. Lonneker said that makes it feel like Anaheim is "a little bit lower on the supply chain priority list," meaning that the larger IOUs, which tend to place larger orders, get a little more preference on items such as transformers, switches, and cable.

Lonneker noted that lead times for distribution transformers for residential areas have continued to stay long — with the utility typically waiting one to two years to see orders fulfilled, while it used to see about 23 weeks for these orders to come in.

"We're really struggling to balance the delivery of our equipment with the growth in demand here in Anaheim," she said.

"Some of the ways we've been mitigating that is we've been looking at increasing the number of manufacturers that we bid out our equipment to. For instance, we would typically have a few domestic partners that we would bid out. Those vendors are no longer able to meet our needs and our delivery dates because they are being pulled in many directions and they themselves aren't receiving enough of the components from their vendors and their manufacturers. We have had to increase our manufacturers to some overseas manufacturers. The overseas manufacturers are able to ship faster than our domestic partners."

SRP has also been looking at expanding its supplier base, with an emphasis on increasing the number of local businesses it works with. In the spring, SRP held a luncheon for area businesses in an effort to boost supplier diversity.

"It was an opportunity for other potential businesses that are local to us that can help us build resilience and help us expand our supply pool," said Lopez.

Continued Coordination

Anaheim is also looking at partnering with other utilities to create better economies of scale for its orders. "There are plenty of smaller, publicly owned utilities in the surrounding areas who have even less economies of scale than Anaheim does. So how can we bundle together to create a larger order, more demand for a manufacturer to be able to put us higher on the priority list?"

A challenge in these efforts is that a lot of utilities have very different systems with different equipment requirements.

"Sharing of materials, bundling together, makes it a little difficult because we all have different systems," explained Lonneker, noting how neighboring public power utility Los Angeles Department of Water and Power's distribution network is based on a different voltage as just one measure that means the systems use a "whole different set of materials."

However, Lonneker noted that Anaheim's system does share similar configuration to a neighboring IOU, Southern California Edison. "We try to consolidate and make it so that it's standardized, that we don't have any customized equipment that we're ordering that we would be one offs from other utilities such as Edison. If Edison's ordering a certain type of transformer, it's in our best interest to also have the same standard so that we can then, through economies of scale, have an order go through a manufacturer of similar nature."

SRP has similarly participated in regional and national groups to discuss potential industry-wide solutions and coordination, but Lopez stressed that standardization is "easier said than done."

SRP instead has focused on coordinating with other utilities in the Southwest on establishing benchmarks and swapping best practices for overcoming supply challenges.

Lonneker stressed the need for continued action and upward communication on supply chain issues for electric utilities, and noted appreciation for APPA's efforts to relay this message in Washington, D.C. "There needs to be a partnership there for us to be on board with electrification. We need some assistance in helping us get the equipment and the supply chain fixed in any way possible," she said.

How FERC Is Looking at Key Questions About New Large Loads

BY LATIF NURANI, SENIOR REGULATORY COUNSEL, AMERICAN PUBLIC POWER ASSOCIATION

New large loads, particularly data centers for artificial intelligence, are seeking to interconnect to the grid at a time when traditional generation resources are retiring and new resources with equivalent reliability attributes are not coming online quickly enough. Faced with long timelines to interconnect these data centers, developers — including some of the world's largest companies — are proposing extraordinary ways to power their new large loads. One such approach is to co-locate data centers with existing or repowered generation resources.

Co-location poses complex and novel issues for the Federal Energy Regulatory Commission. The issue calls into question the limits of FERC's authority to regulate these arrangements, how much benefit co-located loads receive from the interstate transmission system, and how much they should pay for those benefits. Other important questions are how co-location could affect grid reliability and how existing electric customers could be protected from cost or other impacts from co-location arrangements?

FERC Chairman Mark Christie understands that the commission must act quickly to address these difficult questions, but he has also emphasized the need to 'get it right" when it comes to evaluating co-location issues. The electric industry — including public power — can make significant contributions to national economic growth and technological innovation by supporting the buildout of new data centers, but that cannot come at the expense of our long history of providing reliable and affordable electricity to all Americans.

In November 2024, FERC held a full-day technical conference on co-location to explore these issues in depth. The same day, it rejected an application that would have allowed Amazon to co-locate a large data center with a nuclear plant in PJM. Constellation Energy followed up by filing a complaint at FERC, alleging that PJM's tariff is unjust and unreasonable because it does not contain rules for existing generators seeking to serve a co-located load.

While co-location arrangements are popping up in many regions in the country, the PJM region has seen the most activity. FERC decided to address all the co-location issues within PJM in a single, comprehensive proceeding that kicked off in February 2025.

The February order gave PJM and its transmission owners just a month to answer a series of technical, economic, and engineering questions and to justify why the PJM tariff is just and reasonable. PJM's response in March defended its tariff and presented a menu of options for FERC to consider. While the response left much unanswered, it articulates several important principles.

First, PJM emphasized the role of state regulation. Some states specifically define and limit when and how a load within their jurisdiction can be served by a supplier other than a franchised public utility. Other states, particularly those that have deregulated, allow for greater flexibility. So any co-location arrangements must comply with state law.

Second, PJM acknowledged that there are many kinds of co-location arrangements. Some data centers will rely on the grid for backup power, while others will install protection devices to avoid drawing power from the grid, even when the co-located generator is offline. This echoes the comments made by many panelists at FERC's November 2024 technical conference, where large loads were compared to snowflakes: A data center running a critical defense application will have different needs from one that operates a sports betting site; some data centers will be able to respond to market signals while others won't. PJM wants to facilitate efforts to timely integrate large loads in a manner that meets their unique needs.

Third, PJM debunked the notion that any co-located loads are truly isolated from the grid. As an engineering matter, the co-located load and generator are connected to and synchronized with the multi-state bulk power system. As such, all co-location arrangements benefit from some level of ancillary grid service, such as load following, reserves, and black start capability. Participants involved in co-location arrangements must therefore pay the costs of any grid services they consume, and the arrangements must be reliable and operationally manageable.

FERC is hoping to issue a ruling on the PJM co-location proceeding as early as June this year. That ruling will likely shape how co-location arrangements proceed around the country in the coming years.

The American Public Power Association will continue to monitor this proceeding and related actions across the federal government. We will also continue to bring to members educational offerings not just on co-location, but on the full spectrum of issues related to large loads.

PUBLIC POWER COMMUNITIES
WAUPUN, WISCONSIN

POPULATION: **11,300**

ELECTRIC CUSTOMERS: **4,500**

UTILITY FORMED: **1894**

UTILITY EMPLOYEES: **20**

For more than 130 years, the residents of Waupun, Wisconsin, have had a city-owned water and power utility. The utility originally generated its own power to serve the city, but now mostly has capacity to provide some redundancy for water operations while buying its power supply through long-term contracts with WPPI Energy.

Waupun Utilities isn't the only part of the community with a long legacy — both Steve Brooks, the utility's general manager, and Jen Benson, office and customer service supervisor for Waupun Utilities, are part of families that have lived and operated businesses in the city for generations. A fourth generation of Benson's family continues to operate a prominent local business, and the storefront of the shoe seller Brooks' grandfather started still bears the name.

"I feel like I know most of the community," said Brooks. "There's some trust there. When you are members of the community, they look to you when you're outside of work as well."

Benson added that can mean extending the utility's service mindset to when utility employees are on their own time off duty, even in the grocery store. "We pride ourselves in that great customer service, reliability, and fast response times," said Benson. "There's a sense of pride in knowing who you're helping and knowing you are going to provide the best possible service you can. The person isn't just a number… when you see them at the baseball game one night, the next day you follow up with an answer."

Even though there is already familiarity from living and working in the same community, Brooks said the utility makes an effort to be visible and help the city and community however it can. Whether volunteering to hand out beverages at community events or taking part in projects with the chamber of commerce, Brooks said every effort helps to build and maintain trust.

"It's important that they see you, [that] you're an actual person, and know they can reach out to you," he said.

Utility lineworkers conduct safety demonstrations, read books to children at local schools and the library, and participate in local park programs. The team continuously looks for ways to make these types of programs engaging. For example, last year Benson said a demonstration involved putting a video camera into sewer lines so participants could see how the system worked.

Making utility work engaging for young community members reflects how passionate members of the team are about what they do and helps with a broader strategy of attracting new talent.

The utility just started a youth apprenticeship program and has been offering scholarships to students at nearby schools in addition to training younger staff to prepare them for future leadership.

"When you enjoy what you're doing and serving the community, it makes it not just a job, it makes it fun," said Benson, who has been part of the team for 17 years.

"It's inspiring to see how passionate everyone is," added Brooks, who has 26 years with the utility.

The Waupun Utilities team.

Waupun Utility crew and truck in the 1920s.

Benson and Brooks noted that this passion translates into quality work and care shown to their customers, such as during storm response efforts. The team also stays involved in local, state, and national advocacy for public power, participating in regular meetings with lawmakers and sitting on various advisory boards.

The Waupun team is also focused on supporting economic growth and the additional capacity that comes with it. Brooks said the utility is in the planning phase for a new substation to provide additional redundancy.

Benson noted how in addition to robust preventative maintenance programs focused on extending the life of equipment, the utility has made sure to keep up with technology deployments such as advanced metering infrastructure and an outage management system.

"We take pride that our utility is forward thinking with our services," said Benson. She said customers appreciate having access to usage data and rate comparisons as well as being able to sign up for alerts that can help them prevent getting unexpectedly high bills or let them know when the utility made a repair and how quickly service was restored.

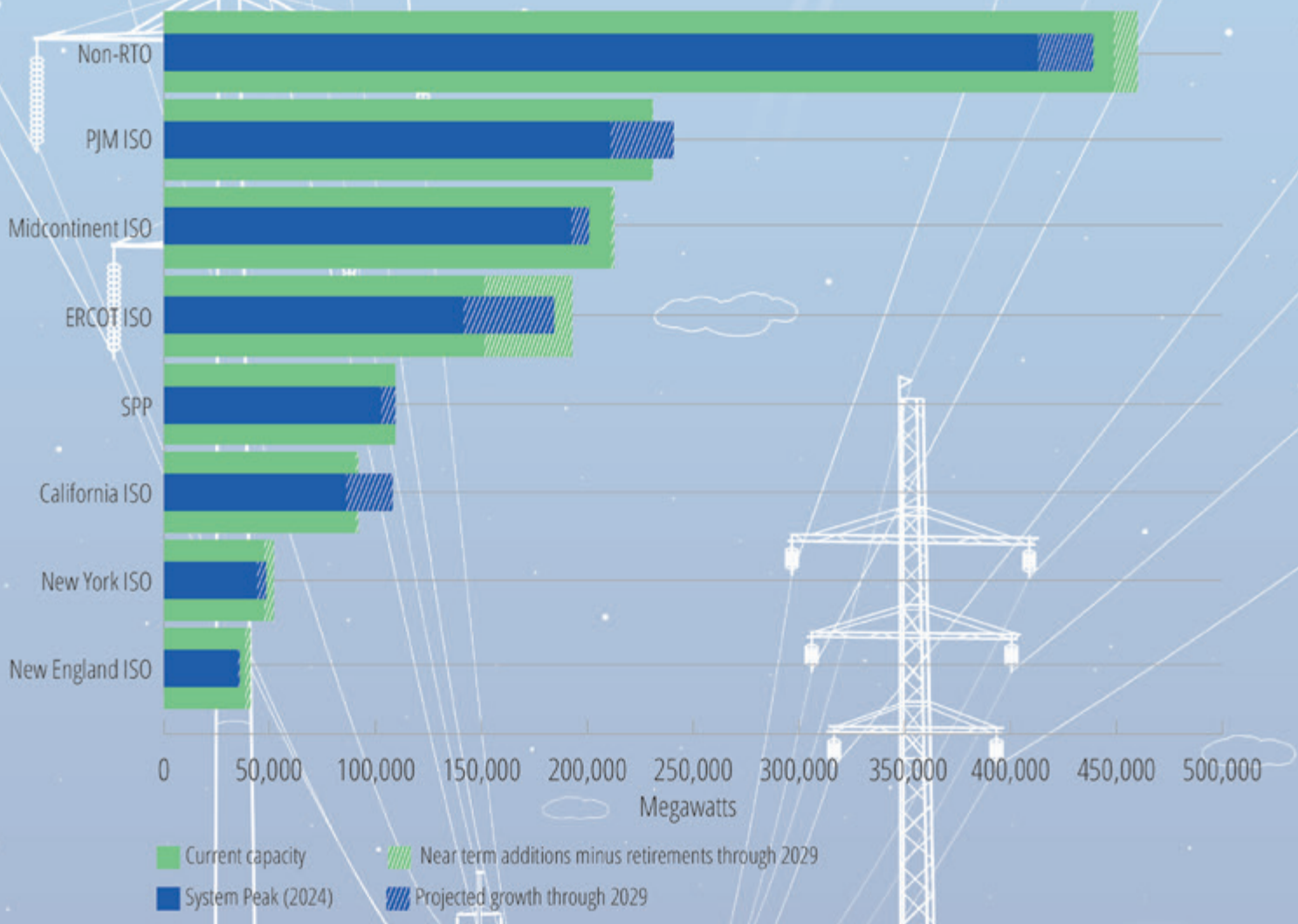
Waupun continues to look at what kind of features it can offer its customers and has continued to evolve and improve through the years.

"We continue to update our infrastructure to try to become more efficient and more resilient," said Brooks.

Johnnie Burns (left) and Ben Sparks. Photo courtesy Village of Yellow Springs, Ohio.

How Regions Are Keeping Up with Electric Demand

As the demand for electricity rises across the U.S., generators are looking to bring more supply online. Here's a general outlook by regional transmission organization of current capacity, projected near-term additions (capacity under construction or permitted as of 2024) minus retirements, and how that compares to projected demand through 2029.



Learn more about trends in generating capacity across the U.S. in our America's Electricity Generation Capacity report.

Sources:
Hitachi Energy Velocity Suite database, accessed January and February 2025.
"Strategic Industries Surging: Driving US Power Demand." Grid Strategies, December 2024.
"2024-2033 Forecast Report of Capacity, Energy, Loads, and Transmission." ISO New England, May 2024.
"2029 Local Capacity Study" California ISO, April 2024.

Earn a 2025 Public Power Customer Satisfaction Award

Subscribe to the Public Power Data Source to enjoy:

- Inclusion in APPA's Public Power Customer Satisfaction Awards Program
- Tools to survey your own customers annually and best practices for a achieving a high completion rate
- National and regional customer comparison data
- Actionable content and customer engagement tools for your marketing and communications teams

LEARN MORE and subscribe at PublicPower.org/CustomerSatisfaction or Products@PublicPower.org.

PUBLIC POWER CUSTOMER SATISFACTION AWARD
American Public Power Association

AMERICAN PUBLIC POWER ASSOCIATION
Powering Strong Communities

RP3 RELIABLE PUBLIC POWER PROVIDER

American Public Power Association

Earn recognition for being an efficient, safe, and reliable utility.

RP3 is a great program that highlights the areas where your utility is meeting and exceeding industry standards, as well as those you need to improve upon. We found multiple areas during our first application process that needed attention. We worked on these areas diligently, and by the time we went through the RP3 application process again, we had achieved almost all of them.

CITY OF TROY, ALABAMA

Apply by September 30

PublicPower.org/RP3

AMERICAN PUBLIC POWER ASSOCIATION

Powering Strong Communities