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AMERICAN PUBLIC POWER ASSOCIATION



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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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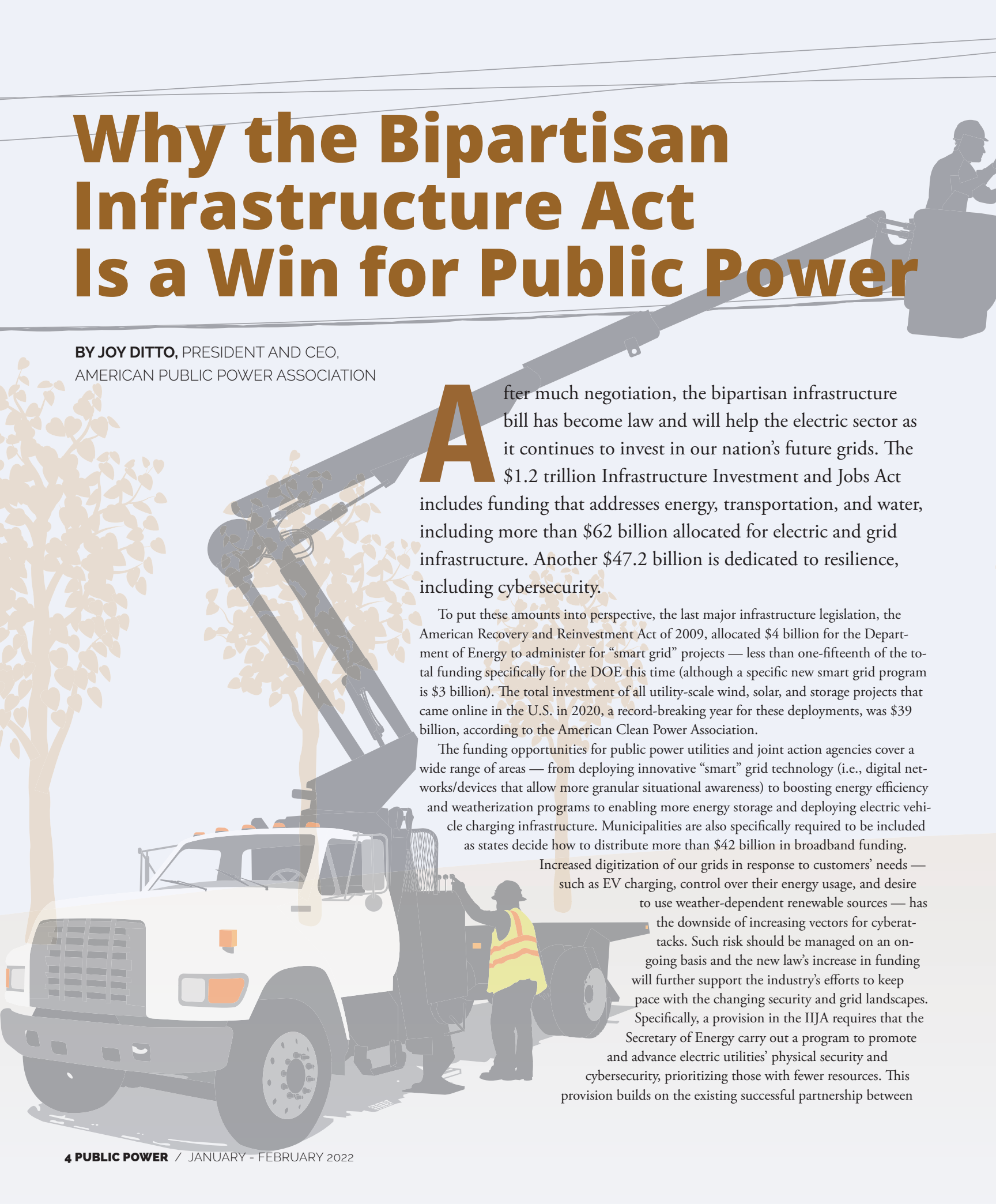
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Why the Bipartisan Infrastructure Act Is a Win for Public Power



BY JOY DITTO, PRESIDENT AND CEO,
AMERICAN PUBLIC POWER ASSOCIATION

After much negotiation, the bipartisan infrastructure bill has become law and will help the electric sector as it continues to invest in our nation's future grids. The \$1.2 trillion Infrastructure Investment and Jobs Act includes funding that addresses energy, transportation, and water, including more than \$62 billion allocated for electric and grid infrastructure. Another \$47.2 billion is dedicated to resilience, including cybersecurity.

To put these amounts into perspective, the last major infrastructure legislation, the American Recovery and Reinvestment Act of 2009, allocated \$4 billion for the Department of Energy to administer for "smart grid" projects — less than one-fifteenth of the total funding specifically for the DOE this time (although a specific new smart grid program is \$3 billion). The total investment of all utility-scale wind, solar, and storage projects that came online in the U.S. in 2020, a record-breaking year for these deployments, was \$39 billion, according to the American Clean Power Association.

The funding opportunities for public power utilities and joint action agencies cover a wide range of areas — from deploying innovative "smart" grid technology (i.e., digital networks/devices that allow more granular situational awareness) to boosting energy efficiency and weatherization programs to enabling more energy storage and deploying electric vehicle charging infrastructure. Municipalities are also specifically required to be included as states decide how to distribute more than \$42 billion in broadband funding.

Increased digitization of our grids in response to customers' needs — such as EV charging, control over their energy usage, and desire to use weather-dependent renewable sources — has the downside of increasing vectors for cyberattacks. Such risk should be managed on an ongoing basis and the new law's increase in funding will further support the industry's efforts to keep pace with the changing security and grid landscapes. Specifically, a provision in the IIJA requires that the Secretary of Energy carry out a program to promote and advance electric utilities' physical security and cybersecurity, prioritizing those with fewer resources. This provision builds on the existing successful partnership between

An illustration of a street scene. On the left, a utility pole with multiple cross-arms and insulators stands against a light blue sky. A street lamp is visible at the bottom left. To the right, a two-story building with a brown facade and white-trimmed arched windows is shown. A striped awning extends over the ground floor entrance, which displays two mannequins in white clothing. A small, round, ornate light fixture is mounted on the building's facade. The overall style is clean and modern with a warm color palette.

the American Public Power Association and the DOE to bring more resources, training, and cyber and physical security tools to small and medium electric utilities.

Improved infrastructure benefits the entire community. From powering essential businesses to heating and cooling our homes, we rely on electricity for nearly every aspect of our lives. As we integrate more clean energy into our electricity grids, we must ensure we continue to deliver reliable and affordable power to the people and businesses that depend on it.

Extreme weather events have also significantly affected our nation – they led to nearly \$100 billion in damaged infrastructure in 2020. This infrastructure law also helps enhance our ability to respond in the aftermath of major natural disasters. Significantly, the IIJA also increases funding to the Low-Income Home Energy Assistance Program, or LIHEAP, which will help more Americans pay their energy bills, including when recovering from an unexpected weather event.

Having financial support to carry out these priorities will go a long way in helping utilities thrive into the future. But, as highlighted throughout this issue of Public Power magazine, accessing federal funds is only one piece of the picture. Financial stewardship will also require understanding how to effectively manage/execute federally funded programs, building relationships and contracts with third parties, and navigating current supply chain constraints.

APPA is ready to help our members with these challenges. We also continue to push for public power to get equal opportunity to benefit from economic incentives to move our grid forward, most notably through a direct pay refundable tax credit.

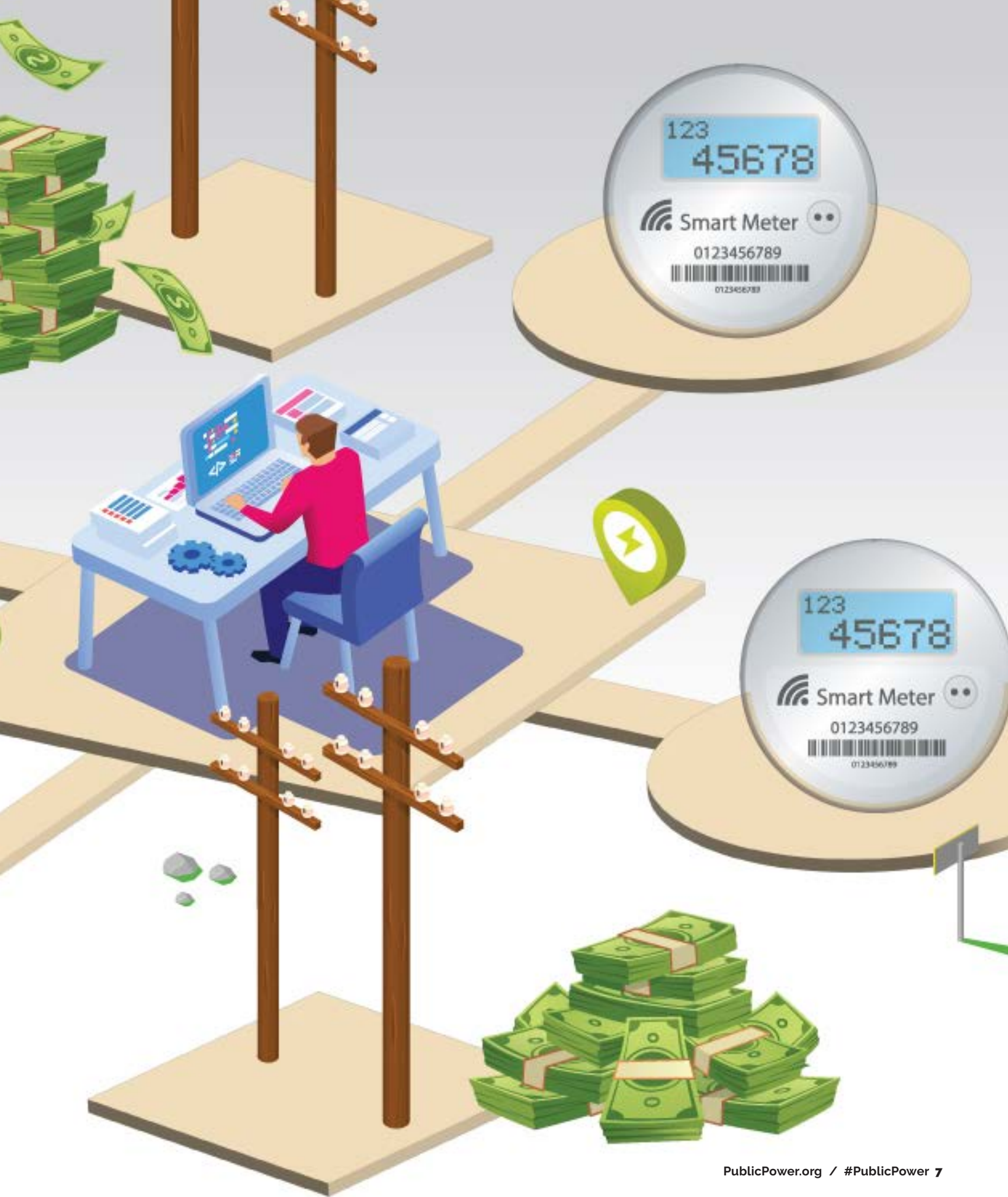
A win for public power is a win for our communities. APPA applauds members of Congress, the White House and the agencies involved, and the dedicated staff who worked to get this legislation over the finish line.

Gaining the Most from Federal Funds:

What Public Power Learned Implementing Smart Grid Projects

BY TANYA DERIVI, SENIOR DIRECTOR,
MEMBER ENGAGEMENT, AMERICAN PUBLIC POWER ASSOCIATION





In 2009, Congress passed the American Recovery and Reinvestment Act, an economic stimulus bill to help pull the nation out of the “Great Recession.” The bill included \$787 billion in infrastructure funding, with about \$4 billion allocated to the Department of Energy to dole out in grants to build smart grid infrastructure.

As utilities again have opportunities to use federal funding to improve various aspects of the electric grid, through funding from the \$1.2 trillion Infrastructure Investment and Jobs Act, we revisited some of the lessons gained from public power utilities that received ARRA funds and what the DOE is likely to do differently this time around.

Public power representatives shared their stories on how they were able to successfully secure funding from the 2009 stimulus program and offered advice to help prepare others seeking to pursue funding from the 2021 infrastructure bill.

What the Feds Learned

A 2012 DOE special report provides a best-practices outlook on implementation, monitoring, and accountability measures.

On the DOE’s end, the recommendations for how the agency can better administer programs include:

- Ensuring that risk assessment, management, and mitigation best practices are in place to assess performance metrics, or through controls for cost overruns or scheduling delays.
- Having robust finance management, accounting, and reporting plans and baselines in place to validate performance results and verify progress reports.
- Planning for regulatory compliance to help DOE staff and its grant and contract recipients achieve performance results — including through formal policies and informal guidance — in addition to having contingency plans in place (e.g., replacing projects that did not have timely environmental approvals).
- Continuously evaluating federal agency staff and ensuring appropriate staffing levels.
- Managing public expectations and aggressively monitoring for potential fraud.

For new funding being made available through IIJA, the Biden administration asked governors to appoint “infrastructure implementation coordinators.” This idea is modeled upon a successful effort used in 2009. This nationwide network of point people will work with state budget teams and across pertinent departments responsible for energy, broadband, and transportation investments.

Federal efforts to spend down this latest infusion of infrastructure funding might, once again, be a slower process than for other types of readily disbursable or formula funding (such as unemployment compensation). These kinds of discretionary programs typically involve waiting for federal agencies to design new programs or revise rules for existing programs (as necessary), issue formal rules and information guidance, and advertise funding opportunities to solicit applications before the review and contracting process can even begin. Some funding areas might also seek to prioritize projects that reach underserved areas, such as broadband deployment. Striking that regulatory and programmatic balance could be complicated, so to not discourage participation with overly complex program rules, thoughtful program development will be key.



"It would have been good to devote funding and begin implementing cybersecurity protocols more as a parallel path with the hardware and software deployment from day one."

CLINT ALLEN, ASSISTANT UTILITY DIRECTOR,
DANVERS ELECTRIC DIVISION, MASSACHUSETTS

Danvers had its entire smart grid team present for all site visits to help explain the complete design and build-out of a then cutting-edge WiMax network. "Additionally, we had all the internal sub teams on hand to address any technical questions, which included staff on change management, communications, cybersecurity, customer services, integration, and the IT teams. It was really a division- and town-wide effort and we needed everyone involved" to be successful, Allen said.

He also remembered that the post-funding compliance process involved receiving myriad task orders from the DOE and then drafting, approving, and issuing the required policies and procedures outlined in them. "The most surprising thing was that, at those site visits, DOE expected hard copies of all documents on hand, at the ready. This meant we also needed a way to catalog and furnish any one during the in-person review. We had about a dozen bankers' boxes full of color-coded compliance documents with their own road map; this added a lot of work to an already arduous process," Allen remembered.

Looking to the future, Danvers Electric would be very interested in grants that could help customers who cannot do so now afford reliable and efficient heat pumps or electric vehicles.

Adjusting as Necessary

Southern California's Burbank Water and Power serves a densely populated 17-square-mile city just north of Los Angeles. Known as the "Media Capital of the World," Burbank's daytime population nearly doubles on weekdays to 200,000 people; it is home to companies including the Walt

Being Prepared

Located 20 miles northeast of Boston, the Danvers, Massachusetts, Electric Division received \$8.5 million in DOE Smart Grid Investment Grant funding toward a \$17 million initiative to deploy smart meters to all 13,000 of its customers, upgrade cybersecurity systems, and automate outage management and other distribution operations. Clint Allen, now the assistant utility director, recalled that Danvers was "fortunate to have enough qualified internal staff to handle the multiple facets of the project." He said that consultants were also necessary to provide guidance in working with the DOE and in developing processes.

Drafting and implementing cybersecurity requirements for the DOE proved to be the most difficult aspect. "That focus came in the third year, in preparation for site visits and audits. It would have been good to devote funding and begin implementing cybersecurity protocols more as a parallel path with the hardware and software deployment from Day One," Allen recalled.

There were annual site visits from 2012–2014, followed by an implementation close-out site visit. "It was a heavy lift preparing presentations that needed to address incredibly technical and complex components of the project to an audience that did not necessarily have the background to digest it," Allen said.

GAINING THE MOST FROM FEDERAL FUNDS

Disney Co., Warner Bros. Studios, and Netflix. BWP serves 53,000 electric meters, with approximately 87% being residential and 13% commercial.

Jim Compton, BWP's assistant general manager and chief technology officer, said federal funds from the DOE's Smart Grid Investment Grant program were used to deploy advanced metering infrastructure system-wide.

"The fiber-optic mesh network build-out was completed within six months, and the physical residential meter deployment took four months, after a year of planning," he said. The most time-consuming and high-risk elements were in deploying commercial meter replacements since they required two electricians and access to the business. "The extra-large customer meter replacements were also time-consuming, given that most were connected to phone lines to send data back to BWP," Compton added.

"In retrospect, although BWP approached it as a large-scale program broken into smaller projects, having additional in-house resources would have been helpful to execute a project of this magnitude," he explained.

While the DOE was very supportive in facilitating activity, BWP conducted "a lot of preplanning, and DOE required a Project Execution Plan that described the overall work plan for the program," Compton recalled. The project plan included descriptions of the multiple projects, management structure, resources, project management approach, resource-loaded project schedule, budget, risk assessment, and benefits assessments. The DOE also required periodic online reporting and approval of a cybersecurity plan and a metrics and benefits reporting plan.

Compton said that "throughout the process, DOE representatives were very helpful and supportive. Two DOE staff site visits allowed a project review and status process as well," he added.

BWP did not spend its full share of funds because all the proposed projects could not be economically justified. The funding amount was adjusted and, post-award, the DOE also used a third-party auditor to perform a final incurred-cost audit. "Actual costs expended for both the grant funds and our matching funds were audited for allowability, allocability, and reasonableness," Compton said, with BWP ultimately being awarded \$20 million.

For its current efforts, Compton shared how BWP works to prioritize infrastructure projects that help reduce greenhouse gas emissions in disadvantaged communities. He said that more than 25% of Burbank's residents live in such communities.

For example, Burbank has low-income and multi-unit dwelling customers who have difficulty deploying EV charging infrastructure on

their own. "For that reason, BWP deployments are prioritized to be near multi-unit dwellings and in disadvantaged communities to improve transportation electrification adoption and directly benefit these communities," he said.

Checking in Regularly

The Municipal Electric Authority of Georgia, also known as MEAG Power, received \$12 million in DOE Smart Grid Investment Grant funding. The funding focused primarily on improving distribution automation and increasing system reliability of the various substations providing power to MEAG Power's 49 participant distribution communities in Georgia.

Mike Stanley, the joint action agency's manager of operational technology, said that one of the major factors that made MEAG Power's application successful was the scoping work to include certain technology upgrades within all 49 communities. "As various phases of the projects were completed over time, it was common for DOE to have discussions with both MEAG Power as well as certain MEAG Power participant personnel, so that they could understand the full benefits of the project from both the transmission and distribution perspectives," Stanley said.

Throughout the project, MEAG Power had regular contact with the DOE. "During the early project stages, we had contact with certain DOE contractual staff that assisted us in coming up with our initial contract with the DOE," Stanley said. "After the initial contract was established, we were then assigned a DOE technical primary contact for the remaining course of the three-year project."

That contact had worked in the electric industry and was knowledgeable about the technology that MEAG Power was deploying and assisted with reporting the benefits of the project. Stanley said that MEAG Power had regular check-ins with the DOE and hosted in-person meetings annually. "The in-person meetings were very beneficial; we scheduled DOE to meet with some of our participant personnel to discuss project benefits at a distribution level." He said that combined meeting cadence was "just about right."

Once the project was complete, the DOE had ongoing discussions with MEAG Power for the next few years concerning its understanding of the full benefits of the project.

Looking ahead, Stanley said that, should MEAG Power apply for new funding from the 2021 infrastructure bill, it would consider highlighting project assistance for low-income and/or disadvantaged areas across the communities it serves.



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Shortage Changed:

How Utilities Are Adapting to Supply Chain Issues

BY BETSY LOEFF, CONTRIBUTING WRITER



When lead time on getting a new transformer goes from three months to a year, and a bucket truck now takes twice as long to acquire — two years versus one — it's not business as usual. Equipment shortages have become a challenge for public power providers all over the country. Here's a look at the problem and how some utilities are changing their processes to deal with it.

Putting Some Wait On

After two years of news about empty grocery store shelves, toilet-paper hoarding, and cargo ships unable to dock for unloading, it's no great surprise that supply chain shortages are impacting the power sector. The wait for equipment varies depending on the location and size of the utility and on the item being ordered.

For Huntsville, Alabama, shortages aren't new or exclusively COVID-19-related. This city of some 215,000 people is one of the fastest-growing in the country. What's in short supply for this booming town? Pad-mounted distribution transformers.

"As soon as shipments come in, we're getting them deployed to keep up with residential and commercial growth," said the utility's president and CEO, Wes Kelley. "We've grown accustomed to fairly quick turnaround on traditional residential underground facilities, but recently we've encountered dramatically longer lead times, going from a month or two to a year or more for deliveries."

Justin Gibbons, purchasing agent for Denison Municipal Utilities in Iowa, has seen similar problems for more than a year for the town of about 9,000. "We order our transformers at the beginning of the year, and, in 2021, we did not get them until October," he said. Usually, that order takes

only a few months. His 2022 order, which was sent to the vendor in September, is projected to arrive in nine months, too.

Steven Cook is senior electrical engineer for Rochester Public Utilities, which serves 57,000 electricity customers in Rochester, Minnesota. He said transformer delivery times now change. "We are provided with regular status reports from our supplier, and it is very common for the expected manufacturing date to push out from the date provided at order placement," he noted.

"Fiber-optic cable quoted lead times have gone from four months to more than 12," said Cook. "We had issues sourcing conduits, cable, terminations, elbows, fuses and other items in 2021."

Service-related delays are hitting utilities, too. For instance, Gibbons said he sometimes sends transformers from his town in Iowa to a repair shop in Tennessee and usually gets the repaired transformers back within two months. "We shipped one out this past year and never heard anything about it, so after a while, we called the repair shop. They told us that our transformer was sitting in a warehouse in St. Louis because they didn't have a truck to pick it up." The device made it home to Iowa in about four months.

Depleted Supply

Several circumstances are driving the shortages. In the Southeast, part of the strain comes from continuing growth of local communities, like Huntsville. Weather has played a part, too. "We had a really bad hurricane season last year," said Nathan Mitchell, senior director of operations programs for the American Public Power Association. "A lot of emergency stock was used up."

Mitchell added that the hurricanes that hit the South and Southeast weren't the only culprits, as floods and wildfires affected supplies in other parts of the country, too.

This happened at the same time manufacturers struggled to get the specialized "core" steel used in transformer production, much of it coming from overseas. There's also competition for that steel from the auto industry, and some of the steel plants and manufacturing facilities are grappling with labor shortages. "The transformer manufacturers can't keep up with typical demand. With extra transformers being required to restock emergency supplies, it's amplified the problem," Mitchell said.

Transformers aren't the only critical equipment in short supply. "Even getting a pickup truck is going to be a struggle in 2022," Kelley said, "and there's about a two-year lead time on bucket trucks right now." That's due to the chip shortage, he explained.



SHORTAGE CHANGED: HOW UTILITIES ARE ADAPTING TO SUPPLY CHAIN ISSUES

Gibbons has seen delays with equipment made of plastic, and so has Kelley. “That problem seemed to be attributed to the Texas freeze last winter,” Kelley said. “With so many facilities in Houston, that industry was heavily impacted.”

Along with delays in receiving materials and equipment, utilities are facing rising costs. “The cost of transformers is going up two to three times what it typically would be,” Mitchell said.

“Without knowing how long the increases will last and if there are going to be any offsetting price decreases in other items required to provide service, it is too early to tell what the rate impacts will be,” Cook said.

Kelley added that cost impacts won’t be immediate. “We won’t pay the increased cost until we actually get the material,” he explained. “When the material comes, we’ll pay the higher prices, but because we are getting less material, we’re probably not spending all of the money we had budgeted now.” In other words, cost increases could be mitigated by reduced spending and creative workarounds.

Coping Strategies

Utilities know lead times on critical grid equipment has grown considerably, but their customers don’t. In Rochester, Minnesota, Cook said his team has made educating developers a priority. “At predevelopment meetings, we inform the developer or project owner of the lead-time issues with distribution transformers,” he explained. “For commercial projects, we provide the customer and their engineer or electrician with a load data sheet, and we will not start sizing the transformer until we receive it back.”

Cook added that the information on the data sheets is similar to what developer electricians need, so it should be available early in the project, giving time for equipment to arrive, provided the developers comply with new processes and don’t wait until the last minute to turn in those load data sheets.

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"Even if [reconditioned transformers] last only half as long as new ones, it's plenty long enough to get us through this shortage."

Wes Kelley, CEO, Huntsville Utilities, Alabama

Huntsville also educated developers and wound up with what Kelley joked was its own "toilet paper rush." This prompted the utility to put in some new rules and controls. "We won't allocate any transformer to a project until a curb and gutter is already poured at the facility. We don't need a bunch of transformers sitting in the field," he said.

In Denison, Gibbons is educating his crews, making sure people know about the supply issues so they can be proactive in requesting material. He's also taking inventory more often to "stay on top of things." In the past, he said, he'd order some items if his utility was down to a handful of units. "Now, if we get down to 20 items, we should probably be reordering."

The Rochester team has also increased stock levels for the most common sizes of three-phase and single-phase transformers. Huntsville has increased deployment of reconditioned transformers. "Even if these last only half as long as new ones, it's plenty long enough to get us through this shortage," Kelley said.

In addition, Huntsville is less rigid with its bid specifications. "We, like so many municipal systems, go out for bid and take the low bid. But now we're buying from anyone who meets our bid specs at a reasonable price, low bid or not," Kelley said, adding that his utility will pay more for speedier delivery.

Even Huntsville's transformer specifications are a little more lenient given today's market. "Every utility is very particular in the way the transformer connections are designed because crews are accustomed to certain

connectors," he explained. Now, however, the utility will take a transformer with connectors oriented a little differently and make up for it with good training and signage on the equipment.

Other actions public power utilities are taking include:

- Working with mutual aid organizations for tip-sharing and supplies.
- Educating elected officials so that they're not caught off-guard if people bring up the issue.
- Focusing on needs, not wants.
- Contacting other utilities directly. For instance, Alabama Power, an investor-owned utility, sold a truckload of transformers to Huntsville after a local official helped connect people at both utilities.

Expanding ties to other utilities and utility types is happening on a national level, too. "Typically, the three trade organizations work to support their own members in times of emergency," said APPA's Mitchell. Now, APPA is working with the National Rural Electric Cooperative Association and the Edison Electric Institute on how to share equipment in a constrained environment.

Mitchell said co-ops, public power utilities, and IOUs often help each other out in a pinch but, given today's long lead times for equipment and low stock of emergency supplies, the trade associations want to be more proactive and have started discussions about putting agreements and processes in place.

He also advises that purchasing professionals revisit contracting details. "We're hearing that distributors are breaking contracts, so we've pulled together legal counsel to help utilities know what should be in contracts and how to negotiate effectively." APPA is holding a webinar on the topic in February 2022.

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BY EMILY SWENSON BROCK, DIRECTOR, FEDERAL LIAISON CENTER,
GOVERNMENT FINANCE OFFICERS ASSOCIATION



Many investors want more information on the impact their investments can have, and many investors have identified municipal bonds as a way to make “impact investments.” Since bond ratings and investor demand have significant bearings on the pricing of municipal bonds, it is generally in the best interest of an issuer to provide disclosures of material information directly to the investment community through primary offering documents.

An area of significant interest in the public markets is ESG factors, which represent areas that show how a municipal issuer’s credit profile affects the long-term sustainability of a community. The three factors are: 1) an exposure to climate risk and other environmental factors (“E”), 2) long-term social factors (“S”), and 3) governance issues (“G”). Public power entities play an important role in that overall assessment by providing specifics about their ESG challenges and action plans and, in doing so, increasing transparency to the entire municipal market.

The Government Finance Officers Association recommends that municipal issuers evaluate the development and disclosure of information regarding the primary ESG risks applicable to municipal issuers and their bonds in their preliminary and final official statements used in connection with bond sales and in other voluntary disclosure.

Identifying Environmental Risks

The increase in the number of extreme weather events in recent years has raised public awareness about climate. In addition to commercial customers who might want to know how a utility’s emission profile can help or detract from their environmental goals, investors and rating analysts are also looking to see what plans an issuer has to address climate risks. Any information an issuer has on the potential economic impact of these risks, and steps to mitigate them, may be helpful to investors and rating analysts.

The first step in developing environmental disclosure information is to identify the primary environmental risks applicable to a public power agency or its bonds. This information will take time to assemble and

prepare, so even if a utility is not planning a bond issuance in the short term, it should consider compiling relevant information when practicable in anticipation of a future bond issuance. That process should include:

- Identifying the primary environmental or climate risks for your area. Rather than attempting to identify every risk that could occur in your jurisdiction, start by addressing likely risks and risks with the potential for the most material impact on your agency or the creditworthiness of your bonds. Later, address lower-possibility risks and risks with less impact on the issuer.
- Consulting bond-offering documents of peers. Environmental and climate risks are often regional. Issuers in proximity may already be disclosing environmental risks, which may be used as a guide to identify and inform your environmental risk disclosure.
- Quantifying the risks. Is there information available regarding the impact of these risks on your pledged revenue stream, finances, economy, or other measures that investors might want to know? Any forward-looking data or projections should be accompanied by the appropriate cautionary language because natural disasters are, by their nature, unpredictable events.

In short, determine the risk and its nexus to credit. You should also consider the potential impact for each credit or enterprise, because that impact may be quite different depending on the nature of each credit or enterprise.

When a risk is considered material, you must also identify policy actions taken, which may include any goals established, progress toward meeting those goals, and how these policies and goals are tracked.

A final part of the process is to summarize the information for an investor to gain a general understanding of your response efforts.

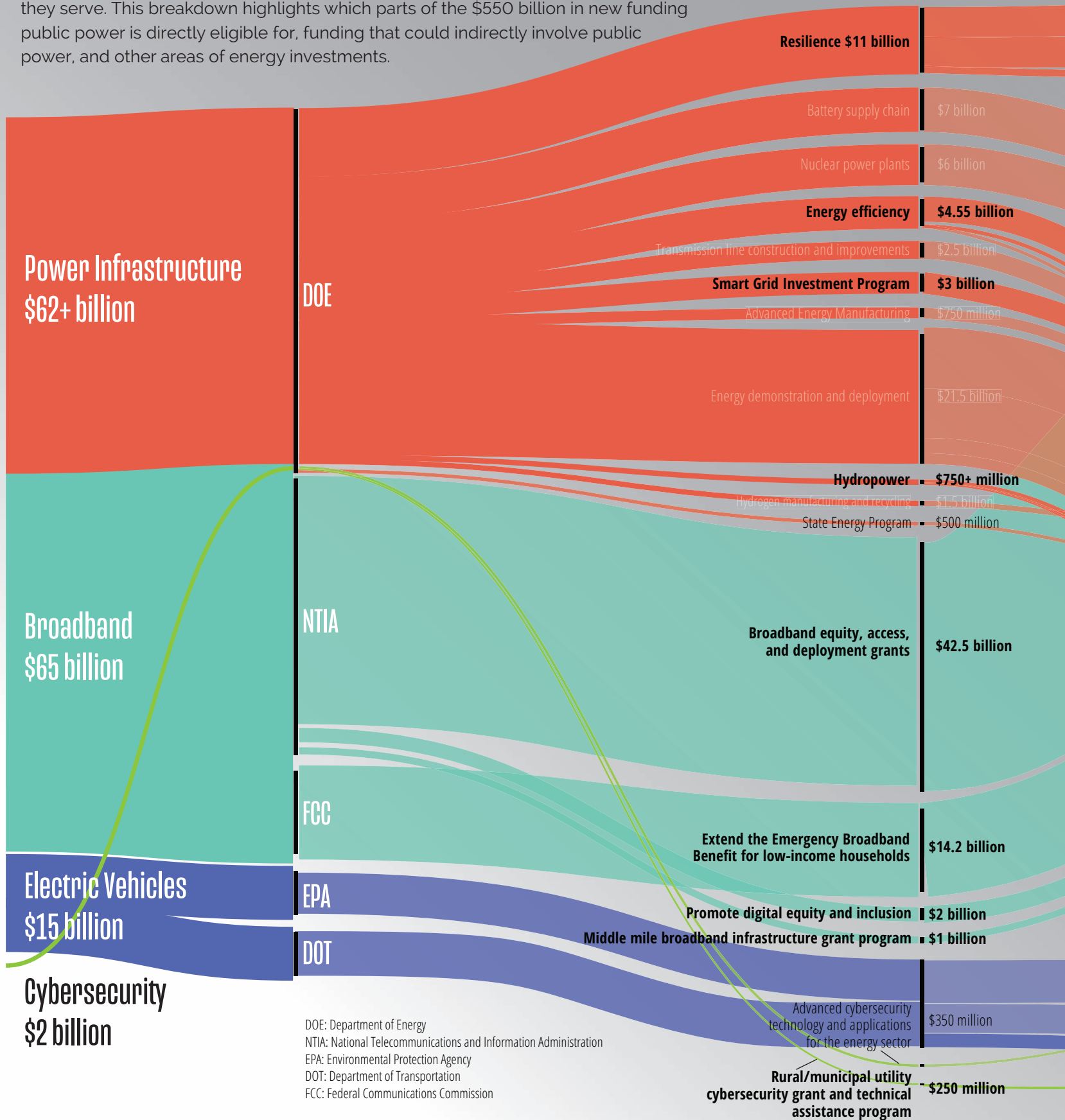
Disclosing environmental risks might not be right for you and might be more difficult for smaller utilities that don’t have easy access to bond counsel, disclosure counsel, or a municipal adviser to discuss these matters.

As we move together in an evolving world and investor base more aware of material ESG factors, GFOA is available to equip municipal issuers with basic tools to provide their investors information about the risks, the policies implemented to address the risks, and disclosure considerations. We understand that this is an iterative process, and we look forward to working with our partners as considerations in ESG disclosures continue to evolve.

Get more guidance at www.gfoa.org/esg.

INFRASTRUCTURE AND INVESTMENT JOBS ACT: OP

The Infrastructure and Investment Jobs Act, signed into law November 2021, will provide funding for many areas that affect public power utilities and the communities they serve. This breakdown highlights which parts of the \$550 billion in new funding public power is directly eligible for, funding that could indirectly involve public power, and other areas of energy investments.



OPPORTUNITIES FOR PUBLIC POWER

Prevent power disruptions and enhance grid resilience \$5 billion

\$1.5 billion set aside for utilities with less than 4 GWh in sales

Resilience and reliability R&D \$5 billion

Improve resilience, safety, reliability, and availability of energy in rural and remote areas \$1 billion

At least \$100 million to each state – and must include municipalities

Directly eligible

Weatherization Assistance Program \$3.5 billion

Energy Efficiency and Conservation Block Grant \$550 million

Energy efficiency, renewables, or zero-emission vehicle infrastructure at schools \$500 million

Carbon capture and industrial emissions \$10 billion†

Hydrogen \$8 billion

Advanced nuclear \$2.5 billion

Projects in rural and economically disadvantaged communities \$1.5 billion

Incentives for capital improvements to hydroelectric facilities \$553.6 million

Production incentives \$125 million

Efficiency improvements \$75 million

Electric school buses and ferries \$7.5 billion

State formula funding to develop a National Charging Network \$5 billion

Charging and fueling infrastructure to make "clean corridors" \$2.5 billion

Other energy

Indirectly involved

Visit www.PublicPower.org/InfrastructureFunding for more information and resources on these opportunities.

Choosing Strategic Partners Wisely

How Public Power Vets Third-Party Services

BY JOHN EGAN, CONTRIBUTING WRITER





As operating a public power utility becomes increasingly complex, utilities are relying on a broad array of third-party partners that can help them prepare for the future or offer expertise in a new or niche area. Public power leaders seek strategic partnerships with third parties to perform certain specialized tasks, such as complying with standards developed by the North American Electric Reliability Corporation; infrastructure grant writing; complex engineering, design, and construction projects; installing an enterprise resource planning platform; and negotiating power purchase agreements.

As these partnerships become more common, utilities are reevaluating their approaches to contracting to ensure the vendor is the right fit, both parties gain from the deal, and risks are minimized.



Negotiating Win-Win Contracts

The cost of renewable generation has plummeted over the last 15 years, driven by technology advances and tax-based incentives. Given their not-for-profit status, many public power utilities cannot take direct advantage of the tax-based incentives as they are currently designed. This is one reason many public power utilities negotiate power purchase agreements, or PPAs.

With prices and policies related to sources of renewable generation in flux, negotiating a PPA today requires understanding both where the market is and where it is likely to go.

Muscatine Power and Water, a public power utility in Iowa, used an outside lawyer to negotiate a PPA for a 13-megawatt wind project, the South Fork Wind Farm, which came online in 2016. The utility is using the same lawyer to negotiate a PPA for a 24- to 30-MW solar project that is expected to begin operating in late 2024.

In both cases, in-house staff took the lead in negotiations with direct support from outside counsel, explained Gage Huston, Muscatine's general manager. "This approach has worked well. Our staff understand our utility's specific circumstances, and the outside counsel brings a wealth of experience, expertise, and perspective on renewable PPAs. It's a good complement."

A decision to "go it alone" could be costly, as the market for some services is extremely complex and dynamic.

Jamie Mahne, vice president of client services and chief client officer at The Energy Authority, or TEA, said his firm has seen sharp swings in the renewable energy market since COVID-19 hit the U.S. nearly two years ago.

"Cost reductions for solar and wind have flattened, and, in some cases, costs are rising," he said, citing the latest Levelized Cost of Energy study by the investment firm Lazard.

CHOOSING STRATEGIC PARTNERS WISELY: HOW PUBLIC POWER VETS THIRD-PARTY SERVICES

“Supply chain difficulties have increased the cost of materials. Labor is harder to find and more expensive now. Inflation once again is a factor in the economy,” said Mahne. “Renewable energy projects, and thus renewable energy PPAs, may not always be cheaper in the future.”

For years, Taunton Municipal Lighting Plant in Massachusetts has used master agreements prepared by attorneys and trusted business partners to seek and sign PPAs for renewable generation, according to Devon Tremont, lead resource analyst for the utility.

“It simplifies the process to use a master agreement where counter parties are aware of the general terms and conditions, thus making the process more efficient,” he said.

The timeless truism — “caveat emptor,” or buyer beware — is particularly true now when considering a PPA for renewable energy, as many public power utilities are doing today. Those dense legal documents can run to 90 pages or more, with 10 or more pages devoted to definitions, MPW’s Huston said. “Outside legal assistance is extremely valuable when negotiating a PPA. We have a very good internal legal staff, but we need outside legal counsel that knows the utility industry and PPAs inside and out.”

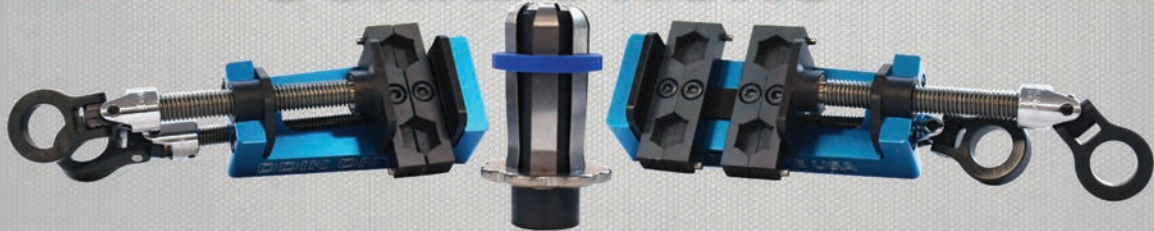
Outside counsel can be particularly helpful in separating the sheep from the goats when it comes to renewable energy developers. “Ever since the extension of the federal production tax credit and investment tax credits, we’ve encountered hundreds of entities that call themselves solar developers,” said TEA’s Mahne. “When we issue an RFP for a client, we might get 200 responses, but not all of those firms will be around in five years.”

As utilities rapidly work to evolve, there is increased demand for third parties to perform a broader array of specialized niche tasks.

Mahne noted how TEA, which is owned by seven public power entities and serves about 60 utilities across the country, has seen a substantial increase in utilities wanting help with requests for proposals related to renewable generation and storage.

“Three years ago, we might do one managed procurement transaction per year, but over the last three years we have done over two gigawatts of managed procurement transactions with an aggregate value of over \$1 billion.”

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“From your customer’s perspective, anything having to do with electricity all traces back to you, even if your name is not on the truck. You never want to lose sight of that.”

GAGE HUSTON, GENERAL MANAGER,
MUSCATINE WATER AND POWER, IOWA

Mahne said this increase is driven in part by rising state requirements for renewable energy and by rising customer expectations that their power will not only be reliable and affordable, but increasingly come from sustainable sources.

Deciding Factors (Beyond Cost)

“Cost reduction is always near the top of why we seek to partner with outside parties, but it’s not the only factor to consider,” said MPW’s Huston.

He listed important non-cost factors as:

- A vendor’s capabilities and experience.
- Its subject matter expertise.
- Whether its values align with that of the utility.
- Whether it has adequate insurance coverage for the work it intends to perform.
- Its safety record.
- Its references.

Platte River Power Authority, a joint action agency based in Colorado, echoes some of Huston’s criteria. “Two significant elements to a successful relationship with an external partner are the solutions provider’s reputation and track record,” said Steve Roalstad, communications and marketing manager at Platte River. “A solutions provider with a good industry reputation, reliable staff, and a solid reputation for obtaining the necessary approvals will typically lead to favorable outcomes.”

Roalstad said the successful completion of the 300-MW Roundhouse Wind Farm in Cheyenne, Wyoming, was due in part to the solutions provider’s reputation and track record.

Getting to Win-Win Situations

The book *Getting to Yes* helped introduce the concept of “win-win” into the business vocabulary four decades ago. It posits that stable, mutually beneficial strategic partnerships result from interest-based bargaining, where both sides understand the strategic interests of the other and work in good faith to find common ground. “Win-win” agreements ensure that both sides benefit, but “win-lose” deals, where one party wins and the other loses, do not lead to a stable strategic partnership.

Some considerations that public power utilities might want to weigh in contracting services include:

- If you invest time and effort to build trust with a third party, you will get a better result. If you don’t, you won’t.
- Maintain some oversight or control over contractors. In other words, “finding an external partner” doesn’t mean “abdicate.”
- Understand your expectations going into a negotiation. With some degree of specificity, define what “success” and “failure” look like.
- Don’t be afraid to have periodic “check-in” meetings with contractors to ensure both of you are still on the same page. You can use those meetings to make minor changes to your agreements, if necessary.
- Estimated cost savings don’t always pan out. If there’s not a really strong case for going outside the organization, try to find a way to keep the work inside.
- The market for some services is extremely dynamic and complex. Do your due diligence, particularly among your public power peers. Joint action agencies, the American Public Power Association, state and regional associations, or specialist firms might have resources to help

navigate the market. Good research leads to better contracts with third parties.

- Don't go into a negotiation thinking, "I'm going to beat up on this vendor." Instead, examine where the strategic interests of both sides are accommodated and honored. Expect a lot of discussion.
- Make sure the reasons for going outside are clear and communicated not only among the leadership team, but also among those whose work may be affected by that decision.
- Think strategically: "One and done" transactions can be expensive for both parties. Could your first partnering decision become the basis for a long-term relationship with a particular solutions provider?

When Outside Expertise Makes Sense

"There's a lot of state and federal grant funds available for infrastructure, but you need to know how to write those applications," said Ken Goulart, general manager of Taunton Municipal Lighting Plant, which serves about 38,000 customers in Massachusetts. "This is not the kind of skill set we currently have internally, so we turn to third parties who are experts."

TMLP has used third parties for over 30 years for vegetation management across its heavily wooded 100-square-mile service area. Goulart estimated that TMLP would have to significantly increase its employee ranks, and purchase new equipment, if it wanted to insource vegetation management.

"Every week, trees somewhere in our service are being trimmed," he commented. "It is more cost-effective to have a well-resourced third party expert perform that work."

Goulart estimated that the utility saves its customer-owners about \$5 million per year by using strategic partners to perform tasks like vegetation management and NERC compliance. The utility has about \$100 million in annual electric revenue, so the 5% cost savings is meaningful.

When to Keep Tasks In-House

The conventional wisdom goes that companies should rely on third parties to perform tasks that are peripheral to their core business. But that may be easier said than done, as public power utilities might define "core" and "peripheral" differently.

As utilities focus more on managing relationships with their customers, how much a task involves direct interaction with customer-owners and



other stakeholders might become a deciding factor in whether to handle it in-house or via a third party.

MPW recently hired an external firm to perform land easements as part of a plan to build a new 161-kilovolt transmission line. "The vendor we used got off on the wrong foot with landowners, so we pivoted and brought the task of managing those relationships back in-house," recalled Huston.

"While these landowners were not actually our customers, they were key stakeholders in this project and we needed to treat them well," he continued. "From your customer's perspective, anything having to do with electricity all traces back to you, even if your name is not on the truck. You never want to lose sight of that."

MPW's experience is notable because the work it turned over to a third party was specialized and not something the utility did on an ongoing basis.

For example, Huston said, a lot of MPW's vegetation management is done by employees, as is the horizontal directional drilling it uses to place underground conduit and lay cable. "Employees bring a higher sense of ownership to their work, which we feel results in higher-quality work. Also, when we insource a task, we have greater control over it."

In other words, customer-facing employees are more likely than third parties to interact positively with customers in the field.

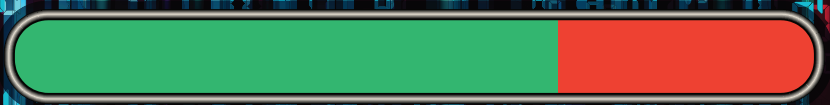
MPW uses a hybrid approach when it comes to performing scheduled maintenance at its coal-fired generating units that will be retired over the coming decade. "We have scaled back staffing at our coal-fired units. Some of this scheduled maintenance work is only done periodically and some of it requires specialized skills and equipment. It makes sense to look for qualified third parties to augment our in-house staff to accomplish this maintenance work," Huston said.



FINDING COVERAGE ERA OF INCREASE

BY PAUL CIAMPOLI, PETER MALONEY, AND TANYA DERIVI





GE IN AN
D RISK

Risks to utility operations are rising, and with them the cost of insurance. In this environment, it can be difficult for a public power utility to retain essential insurance coverage while containing costs.

In recent years, insurance companies have made large payouts to customers who have suffered massive losses. Losses from natural disasters hit \$133 billion in 2017, a historic high, according to the Insurance Information Institute. Losses due to natural catastrophes fell in 2018 and 2019 but rose again in 2020, driven by a record number of severe storms and wildfires in the U.S. In 2020, the costliest losses came from storms and cyclones, which accounted for about 75% of the \$119 billion in losses, followed by wildfires at nearly 20% of losses, and flooding with 4% of losses, according to the institute.

Insurance company SwissRe ranked 2020 as the fifth-costliest year on record since 1970 for the insurance industry.

In order to recapitalize after those losses, insurance companies have a few options that are not necessarily exclusive of each other. They can increase customer premiums, or they can raise the bar in terms of which entities they will insure.

“Insurance carriers have been affected by storms and claim payouts for their insureds, social inflation, and record-setting verdicts,”

Ryan Weber, vice president at Marsh USA, said. He noted that pricing increased the past 15 consecutive quarters (through the first quarter of 2021) but reported signs that the market could be adjusting in insureds’ favor for coverage lines such as property and liability.

Increase in Cyberattacks

Ransomware attacks, such as the attack on Colonial Pipeline in early 2021, have also resulted in increased attention to the risk insurance market.

In May 2021, a Government Accountability Office report on cyber insurance highlighted some trends in the cyber insurance market, including:

- Increasing take-up: Data from a global insurance broker indicate its clients’ take-up rate (proportion of existing clients electing coverage) for cyber insurance rose from 26% in 2016 to 47% in 2020.
- Price increases: Higher prices have coincided with increased demand and higher insurer costs from more frequent and severe cyberattacks. “In a recent survey of insurance brokers, more than half of respondents’ clients saw prices go up 10–30% in late 2020,” the report said.
- Lower coverage limits: The growing number of cyberattacks led insurers to reduce coverage limits for some industry sectors, such as health care and education.
- Cyber-specific policies: Insurers increasingly have offered policies specific to cyber-risk, rather



FINDING COVERAGE IN AN ERA OF INCREASED RISK

than including that risk in packages with other coverage. This shift reflects a desire for more clarity on what is covered and for higher cyber-specific coverage limits.

Adam Lantrip, senior vice president for professional liability and cyber practice leader at specialty insurance brokerage firm CAC Specialty, explained on a podcast why availability of cyber insurance coverage is seemingly shrinking.

“Clients are going to have to demonstrate a much higher baseline level of security in order to qualify for coverage,” he said. Two years ago, “we could have taken just about any company into the marketplace with whatever their controls were and probably been able to get them a pretty good option from somebody in the insurance marketplace.”

“Today, we’re seeing clients that we would objectively think are generally pretty good risks, but they’re answering ‘no’ to one or two or three very specific questions about their security posture, and those ‘no’ responses,” Lantrip added, are resulting in an automatic refusal “from a huge section of the marketplace.”

The U.S. Cybersecurity and Infrastructure Security Agency, within the Department of Homeland Security, noted that a robust cybersecurity insurance market could help reduce the number of successful cyberattacks by: (1) promoting the adoption of preventive measures in return for more coverage; and (2) encouraging the implementation of best practices by basing premiums on an insured’s level of self-protection.

“Many companies forego available policies, however, citing as rationales the perceived high cost of those policies, confusion about what they cover, and uncertainty that their organizations will suffer a cyberattack,” CISA said.

Since 2012, CISA has engaged academia, infrastructure owners and operators, insurers, chief information security officers, risk managers, and others to find ways to expand the cybersecurity insurance market’s ability to address this emerging cyber-risk area. More broadly, the agency has sought input from these same stakeholders on the market’s potential to encourage businesses to improve their cybersecurity in return for more coverage at more affordable rates.

CISA is currently facilitating dialogue about how a cyber-incident data repository could foster both the identification of emerging cybersecurity best practices across sectors and the development of new cybersecurity insurance policies that “reward” businesses for adopting and enforcing those best practices.

Owning Risk

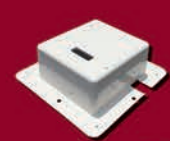
Historically, California’s Sacramento Municipal Utility District has not made any wildfire claims, but the utility operates in a region where wildfires are prevalent, and that proximity can affect perceptions of the risks SMUD faces.

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The risk environment is changing, and it is best to stay ahead of the problem.



In April 2019, Moody's Investors Service revised its ratings outlook on SMUD's outstanding revenue bonds from stable to negative to reflect the more challenging operating environment in California resulting from the impact of wildfires. Moody's revised its rating on SMUD in May 2020, returning the public power utility's outlook to stable.

The risks were addressed, but the lesson was clear: The risk environment is changing, and it is best to stay ahead of the problem. In returning the outlook to stable, Moody's cited SMUD's "comprehensive actions to shield itself from wildfire risk" and its "sizeable insurance policy and strengthening liquidity."

Russell Mills, director of risk management and treasurer at SMUD, said the utility tries to differentiate its risk profile from that of other utilities when it makes its annual presentation to underwriters and brokers when it comes time to renew its insurance coverages.

In those meetings, SMUD highlights efforts such as vegetation management, undergrounding, and hardening assets with its Upper American River Project, a series of 11 dams and eight power houses in a high wild-fire-risk area on the slopes of the Sierra Nevada Mountains.

Increasing insurance coverage is not the only tool in SMUD's kit. The utility conducts probable maximum loss studies to better understand its risk exposures and has been hardening its balance sheet as a precaution against possible disasters.

In 2015–16, SMUD had about \$100 million in excess liability wildfire insurance coverage. Over three years, the utility raised its coverage to \$300 million and then trimmed it back down to about \$250 million.

SMUD also bolstered its commercial paper program by 30% to \$400 million and raised its operating cash on hand by one month. It is paying down debt to have the capacity to issue bonds if the need arises.

"All three work together — insurance, ratings, and reserves," Mills said. "It shows our intent and wherewithal." It also sends a message to the underwriter that the brunt of any liability is not solely on the underwriter, he said.

For cybersecurity threats, Mills recommends utilities take similar steps, such as following the North American Electric Reliability Corp.'s Critical Infrastructure Protection standards and conducting in-house training programs and being prepared to show that the procedures are being followed.

So far, Mills said, no insurance company has turned SMUD down or refused to renew a policy. The utility also has been able to negotiate cuts in proposed premium increases for fire coverage on the order of 10 percentage points.

"At the end of the day, insurance is a means of transferring risk," Mills said. "You have to own the risk, show that 'we are part of this.'"

Finding a Partner

The Northern California Power Agency has worked with its new property insurer to identify further ways the joint action agency could prevent losses and manage insurance risk exposure, according to Monty Hanks, chief financial officer and assistant general manager of administrative services.

Hanks said that 2020 was particularly challenging in that the hardened market meant underwriters provided quotes at the last minute, which left NCPA with little time or negotiating room for better terms or lower premiums. "Despite this, we made a commitment to our members to hit the 'reset' button in our approach to procuring property insurance for our facilities," he said.

NCPA contacted new property insurance market players with expertise in the power generation sector, including FM Global, which insures more than a third of the Fortune 1000 companies. Hanks said that NCPA had traditionally marketed its program about three months prior to the policy's expiration, but FM Global had never quoted it. Hanks learned that three months was not enough time for FM Global to perform its own due diligence.

A utility should lean on its insurance brokers and use them as a resource because they have a broader view of the market and know what the rest of the industry is doing.



He found that the company's engineering-first philosophy and approach, which helps clients become more resilient against natural disasters, matched NCPA's core principles.

"We engaged FM Global in early 2021 to build a plan, and that started with scheduling loss-control visits," he explained. "We learned very quickly that they were not like other property insurance companies. They were guided by the belief that most losses can be prevented, and they will dig deep to understand your business needs to help you reduce your risk," Hanks said. Indeed, the company has a research campus that studies phenomena such as floods, fire, and explosions to provide data spec sheets to help validate and support its engineering recommendations.

Because NCPA's members are dependent upon power plants running to provide stable, cost-effective resources, its resiliency is critical.

One of the recommendations was to improve vegetation management around a geothermal plant, which is in a relatively high fire-risk area. Although NCPA had always taken a proactive approach to vegetation management, FM Global's studies "indicated that we should do more and recommended we create a clearance zone around the plant that maintains forested areas 330 feet away from plant buildings, especially the cooling towers," Hanks said.

NCPA agreed and implemented the recommendation. "Now, NCPA feels like we have found a partner in the property insurance business. The work that we've done as a result will ultimately help us better manage our risks and control operational and maintenance costs," Hanks said.

Shopping Around

In Nebraska, Omaha Public Power District filed a claim as a result of severe flooding that hit the state in 2019. Researchers at the University of Iowa have linked such flood events to warmer weather, particularly higher

temperatures in the Gulf of Mexico, a phenomena they say triggers the "Midwest Water Hose."

Rising floodwaters have also meant rising premiums. For OPPD, that challenge is made even more difficult because it has coal-fired assets in its generation portfolio.

Difficulty finding insurance coverage for new coal projects is becoming more widespread and could become prevalent in America in the coming years, Daniel Laskowsky, director of risk management at OPPD, said.

In 2019, Chubb, a major insurer in the U.S., said it would no longer underwrite the construction and operation of new coal-fired plants or companies that generate more than 30% of revenues from coal generation or mining. By one count, 19 major insurance companies now refuse or restrict their coverage of new coal projects.

"We are doing all we can" in the face of rising threats from natural disasters and increasing premiums, Laskowsky said. He said OPPD has seen double-digit increases in premiums in the renewal process.

OPPD's approach includes having a solid understanding of its risk tolerance, using market competition to its favor, and working with underwriters and brokers as partners where possible.

Laskowsky recommends shopping around to compare insurance coverages and rates. "It may not be something you do every year, because you don't want to burn the market," he said, but if you can find a lower rate, you have to be willing to fight for it and to commit when the time comes in the negotiating process.

Laskowsky also said a utility should lean on its insurance brokers and use them as a resource because they have a broader view of the market and know what the rest of the industry is doing.

In addition, he said, OPPD works with insurance underwriters that are structured as mutual companies that cater to the public power and energy sector. There is more of a partnership approach to doing business and, if a

POLITICALLY LIKE-MINDED STATE LEADERS COULD WORK TOGETHER TO REACH A MUTUAL AGREEMENT ALLOWING PUBLIC POWER UTILITIES TO POOL THEIR CAPACITY FOR SELF-INSURANCE AND TO LEVERAGE ACCESS TO GLOBAL REINSURANCE.

utility participates in the governance process as a member of the organization, “you can have some say in the insurance company’s processes,” he said.

Weber from Marsh USA noted that there are a handful of insurers that specialize in the public power space. “Therefore, each insurance carrier has a pretty good idea of the exposures and landscape of the public power sector.” He recommended that utilities make sure their trading partners are financially stable and know what coverages they are getting from their insurance provider.

He also said utilities can “differentiate themselves in the market by providing thorough underwriting data and starting the renewal process well in advance.”

Pooling

Another model that has been successful is “pooling” insurance coverage across multiple entities. This is a common practice across state and local governmental entities, but it necessarily covers a broader spectrum of services, from police and fire to libraries and public utilities, and therefore may not offer industry-specific coverage that high-risk enterprises may need. Fortunately, this model can also be tailored to a specific industry, provided there is the capital available and the know-how to do so.

Nearly four decades ago, some public power utilities in the Tennessee Valley had no options to buy liability insurance at any price, according to Anthony Salvatore, an area senior vice president with Gallagher.

FINDING COVERAGE IN AN ERA OF INCREASED RISK



The Tennessee Valley Public Power Association, which represents public power utilities within the Tennessee Valley Authority's multistate service area, formed Distributors Insurance Co. with a small amount of startup cash and a \$1 million letter of credit backed by TVA. Its goal was to make competitively priced coverage available to all TVPPA members. In the beginning, DIC had three member accounts with approximately \$200,000 in total premium. Its portfolio has grown astronomically since: DIC now has 80 accounts with approximately \$40 million in assets and \$26 million in surplus. It spends a large amount on safety and loss-control efforts for participating members.

Forming a model like DIC or the Public Utility Mutual Insurance Co. (now a risk-retention group) or Aegis (which provides liability and property coverage to mainly investor-owned utilities in the energy industry) would first require conducting a feasibility study, according to Charles Landgraf, a lawyer with Arnold & Porter.

Actuaries would conduct a study to explore allocations, lawyers would be needed to identify and work through issues, the study would have to identify who could serve in the captive manager function, and then work with brokers and deliver the necessary capital. The more narrowly a study is applied, the easier the issues are to work through. Landgraf also noted that while a study exploring only one state's regulatory law and liability systems would be easier, that reduces the spread of risk and therefore limits the competitive pricing advantages of the pooling model.

Paul Howard, another lawyer at Arnold & Porter, added that the federal Risk Retention Act allows a group captive manager to go national, meaning an entity could be formed in one state to sell insurance to local public power utilities and then sell, or "front," to public power utilities in other states without becoming licensed in each state. However, this multistate solution is limited to liability lines of business only.

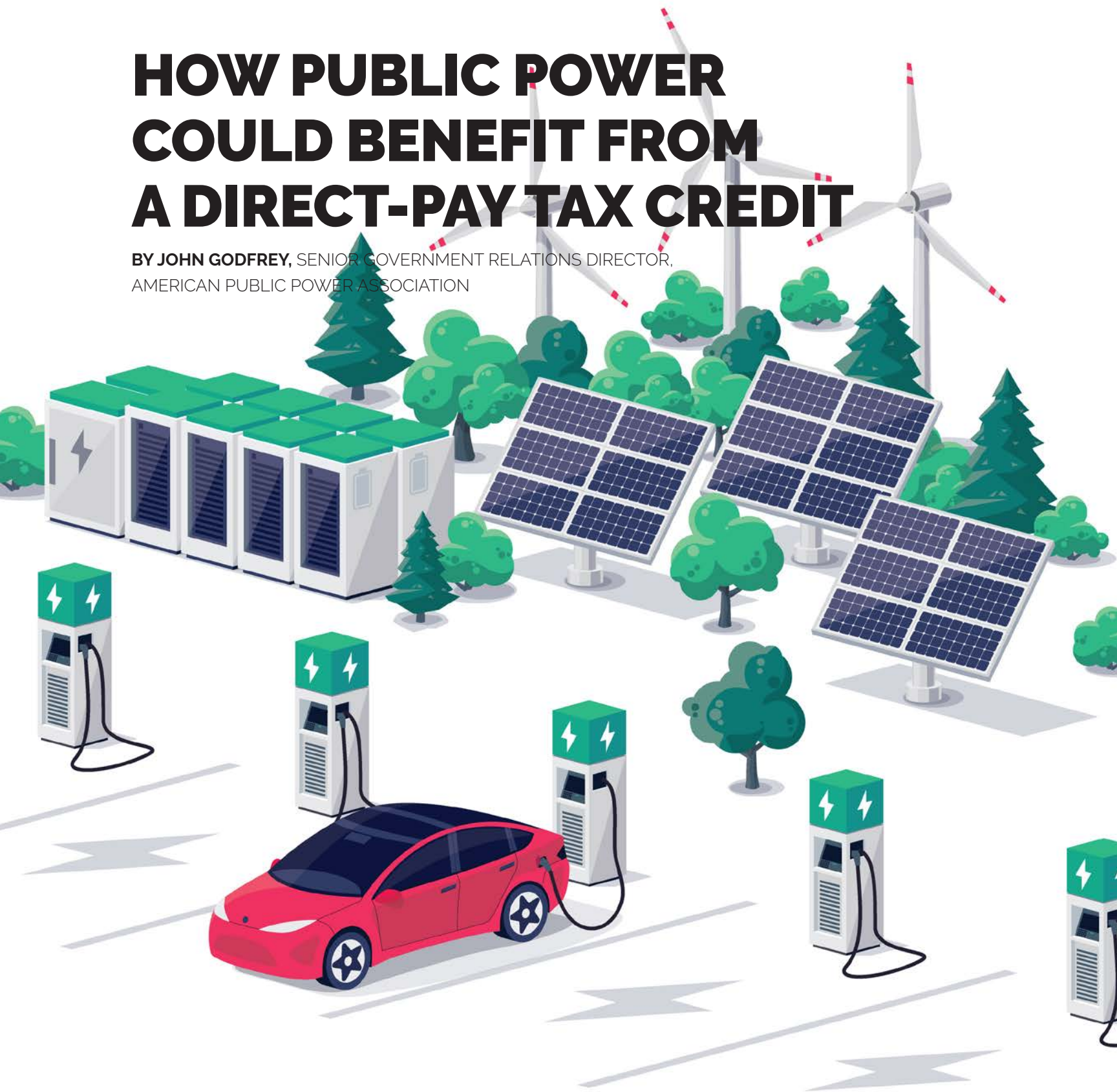
Such a study may cost anywhere from the low six figures for a limited regional approach to the high six figures for a national approach.

"If this became an acute enough problem for state governments in the West, for example, you could in theory work to develop a multistate compact," Howard said. Community-owned utilities may carry a much more sympathetic message to relevant state leaders — namely, their governors and insurance commissioners — seeking regulatory relief through a mini risk-retention policy model. Politically like-minded state leaders could work together to reach a mutual agreement allowing public power utilities to pool their capacity for self-insurance and to leverage access to global reinsurance. Landgraf explained that having the backing of state leaders through an interstate agreement to simplify and streamline regulations could allow a single entity to be domiciled and licensed in one state and serve the other states, too.

There is credibility on all sides: The insurance companies would want to help public power utilities create an insurance solution they could support; state leaders have seen that more needs to be done to incentivize preventive measures within their own and nearby states; and publicly owned utilities need affordable insurance solutions.

HOW PUBLIC POWER COULD BENEFIT FROM A DIRECT-PAY TAX CREDIT

BY JOHN GODFREY, SENIOR GOVERNMENT RELATIONS DIRECTOR,
AMERICAN PUBLIC POWER ASSOCIATION



Arguably, tax credits — predominantly the investment tax credit and production tax credit — are the most powerful federal tools used to incentivize wind, solar, geothermal, and nuclear power development in the U.S. According to the most recent Joint Committee on Taxation estimate, the ITC and PTC alone are worth nearly \$15 billion annually.

While the ITC and PTC are described as “tax breaks,” they are really intended to serve as a payment from the federal government to encourage investments in clean energy. In fact, the Rhodium Group, a leading independent researcher, estimates that the ITC and PTC, coupled with provisions to retain existing non-emitting energy resources such as hydro-power and nuclear power, could cut the power generated from fossil fuels by 50% in just 10 years.

However, tax-exempt entities, including public power utilities, are excluded from these spending programs because they cannot benefit from either the ITC or PTC for a facility that they own. The same is true of any company without enough tax liability to take full advantage of tax credits, but for-profit companies can at least jointly own qualifying facilities with a “tax equity” partner that can monetize the ITC or PTC. However, a public power utility cannot enter this sort of transaction as a co-owner of the facility. Instead, public power utilities only indirectly benefit from the ITC and PTC by entering long-term power purchase agreements with taxable entities that can claim these credits. The problem is that the transactional costs of such agreements can be high, and only a portion of the value of the tax credit is generally considered to be passed on to the purchaser, thus muting the incentive.

Market-wide policy objectives, such as addressing climate change, require tax-based energy incentives that accommodate tax-exempt electric utilities, which collectively serve nearly 30% of retail customers in the U.S. The American Public Power Association has long argued that public power utilities should either have access to the ITC and PTC or receive some form of comparable benefit. At the urging of APPA and the National Rural Electric Cooperative Association, Congress has tried this several times over the years, but the latest proposal — refundable, direct-payment tax credits — shows the most promise.

This would be a two-step approach. The first step is to allow projects owned by public power utilities to qualify for the ITC and PTC. It sounds

simple, but this is a critical step in changing the tax code that requires a fair amount of due diligence to make sure lawmakers get it right.

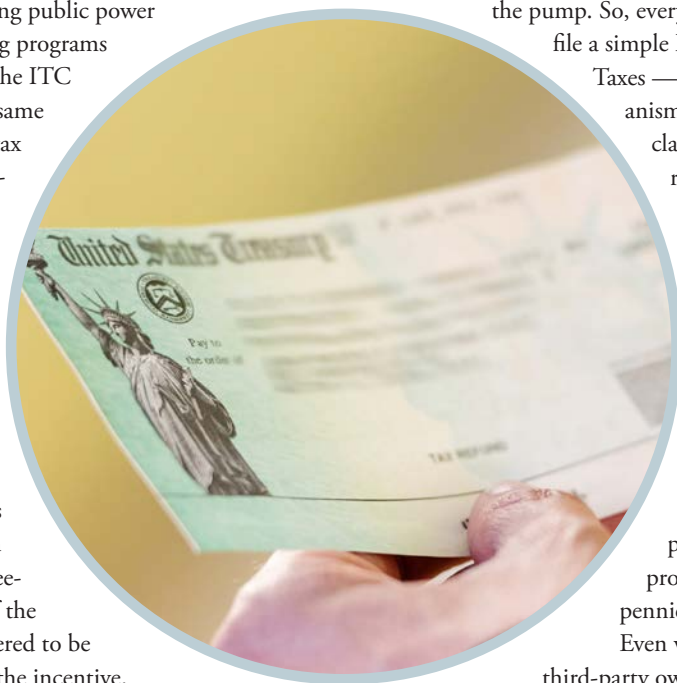
Next is making sure public power utilities can do something with these tax credits. The dominant approach currently being discussed in Washington would allow any project owner to elect for the IRS to deem that the owner has paid taxes in an amount equal to any tax credits it has earned. In turn, the owner relinquishes any right to those credits in the future. This might sound like a distinction without a difference, but swapping a credit against taxes paid for a deemed payment of taxes would allow a public power utility to then file a tax return with the IRS for refund of that deemed payment of taxes.

This is like the federal gasoline excise tax. State and local entities are exempt from the excise tax, but the excise tax is baked into the price paid at the pump. So, every year, thousands of governmental entities file a simple Form 8849 — Claim for Refund of Excise Taxes — with the IRS to get refunded. The mechanism by which public power utilities would claim a refund of “deemed” tax payments related to the ITC and PTC has yet to be decided, but a simple, single-use form akin to Form 8849 would be appropriate.

The implications of this policy change are huge. Rather than a project developer and its tax-equity investors retaining a portion of the value of the ITC and PTC, every penny would stay with the utility to either pass on to customers in the form of lower rates or be available for use in building additional projects. For a \$400 million utility-scale project, a 30% ITC would provide a lot of pennies to pass on.

Even where projects continue to be developed by third-party owners, public power utilities should be able to strike a better deal on the resulting power purchase agreement, knowing they can always do it themselves.

Perhaps more revolutionary will be the effect on smaller utilities and smaller projects. A simple, directly payable tax credit means public power utilities don't have to go hat in hand to developers and tax-equity investors, hoping that their projects are large enough to garner interest. They can also develop projects on public spaces that they might otherwise be leery of having an outside party develop. In other words, this will unleash public power utilities and joint action agencies to develop more clean generation.



Preparing for Rainy Days

By **Susan Partain**, senior manager, content strategy,
American Public Power Association



The wisdom of keeping a reserve fund is sound — you never know when you'll be in the middle of a supply shortage that leads to price spikes, be hit by a disaster that necessitates extensive system repairs, or have a large portion of your customers facing hardship in paying their bills.

Over the past few years, many utilities have faced at least one, if not several, of these scenarios. From the many utilities affected by the price spikes resulting from the cold weather event last winter in Texas and the south-central U.S. to an uptick in extreme weather events and the enduring effects of the pandemic on the economy, the case for building up — and dipping into — reserve funds has been clear.

According to the National Conference of State Legislatures, nearly half of states dipped into reserve funds in fiscal year 2020 to make up for budget shortfalls. This includes two states — New Jersey and Nevada — that used most or all of their reserve funds.

According to a Pew analysis of a report from the National Association of State Budget Officers, state rainy day funds collectively fell by \$1.3 billion in fiscal year 2020, with 13 states reporting a decrease. Despite recently tapping into these funds, many states have been quick to rebound their financial situation and restore the funds. The NASBO report noted that 28 states expected to see their rainy day fund balances grow in fiscal 2021 from the previous year, with a total national net gain in these funds of about \$4.6 billion, which would bring the total to a new high mark of about \$82.3 billion.

States turned their financial outlook around thanks to factors including federal aid for individuals and businesses and a rebounding economy that brought in more tax revenue. When rainy day funds combined with ending balances, states' total balances were also expected to hit a new high, at more than \$126 billion. Pew reported that this meant that at the end of fiscal 2021, states had enough to cover a median of just over 55 days of operating costs — almost twice as long as the median of 28.9 days accrued pre-pandemic, and more than three times the median of 17.3 days that states had allocated prior to the Great Recession.

The Government Finance Officers Association recommends that municipal governments, regardless of size, maintain at minimum an unrestricted budgetary fund balance in their general fund of no less than two months of regular general fund operating revenues or regular general fund

operating expenditures. GFOA further advises that “governments that may be vulnerable to natural disasters, more dependent on a volatile revenue source, or potentially subject to cuts in state aid and/or federal grants may need to maintain a higher level in the unrestricted fund balance.”

Following an analysis in 2015, Pew put forth three factors that can help entities set a target for rainy day funds. These include:

- Defining the purpose for the funds (i.e., when they can be used and what they are for).
- History of revenue volatility.
- Risk tolerance.

For public power utilities, establishing and maintaining a healthy reserve is in part about educating and communicating with the governing board. It can also be about how the funds are described and considered.

In Massachusetts, the towns of Middleborough and Lakeville faced significant damage during a blizzard in 2013. Middleborough Gas and Electric Department, the local public power utility, was able to restore customers' power and repair damaged circuits quickly thanks to mutual aid and other preparedness activities. The storm was costly, with recovery expenses exceeding \$840,000. Jackie Crowley, general manager for MGED, noted that the utility was able to get many of the costs reimbursed through the Federal Emergency Management Agency, thanks to keeping strong records, but that the event got the utility on a path to budgeting recovery funds for future storms and investing in resilience efforts. In addition, MGED's Light Board had approved a Rate Stabilization Account for electric and gas costs that exceed budget forecasts due to extreme weather or market spikes for the small unhedged portion of the portfolio.

“When we have situations that present challenges, like a summer hurricane or winter storm, we go over that info at our commission meeting and talk about what key issues were and how we responded,” said Crowley. “That lays the foundation as we get into the budgeting process for how we'll improve resilience in future years.”

Crowley noted that utility managers work closely with Middleborough's Light Board throughout the budgeting process. She stressed the importance of communicating that the public power utility is a valuable town asset and that investment in the utility is for the long-term benefit of residents and the local economy.

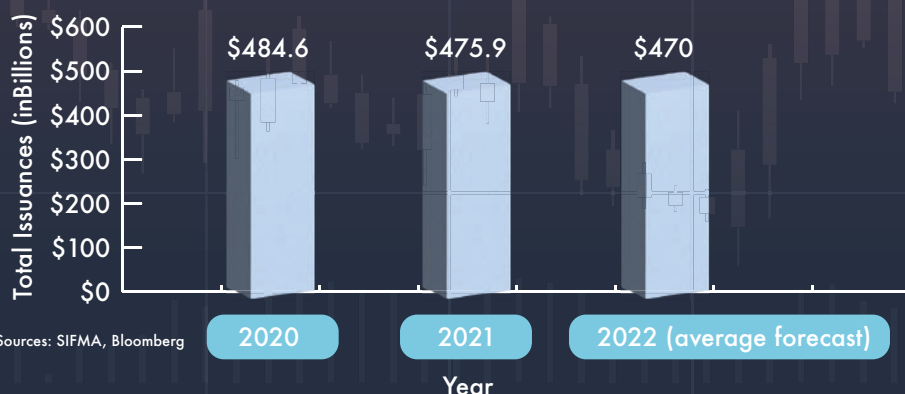
“We present these investments as things that are not really discretionary. ... You have to invest in reliability, plan for future growth, improve energy efficiency and strive for a decarbonized energy portfolio to meet community needs for the long term,” said Crowley. She noted that MGED has worked hard to ensure that resilience investments have not affected customer rates.

Municipal Bonds: A Strong Market for Public Power, Investors

As utilities consider financing (and refinancing) projects, here's a look at trends and forecasts for the municipal bond market.

What's Being Issued

Year over year, municipal bond volume is keeping pace with 2020's record-setting issues



Comparing the first six months of 2021 to the first half of 2020:

- Long-term volume was up 10%
- Tax-exempt volume was up nearly 12%

Sectors with biggest growth:

- Public facilities 127%
- Environmental facilities 78%
- Transportation 49%

Sectors with the biggest decrease:

- Health care -28%
- Education -6%

Sector	2021		2020		Change
	Volume	Issues	Volume	Issues	
Utilities	24,444.2	818	23,074.0	802	5.9%
Electric power	5,817.0	69	5,612.1	66	3.7%

Electric power sector trends from first half 2020 to 2021:

- Refunding volume was down 22%
- 95% increase in new-money issues
- Highest volume from local authorities, state agencies, and direct issuers
- Direct issuer volume up 196%
- Issues from cities and towns down 24%

Source: 2021 Midyear Statistics, The Bond Buyer

Investor activity

In 2021, investor demand for tax-exempt municipal bonds outpaced supply, which resulted in smaller spreads for investors.

Demand is expected to drop in 2022 if interest rates rise.

Factors Affecting 2022 Market

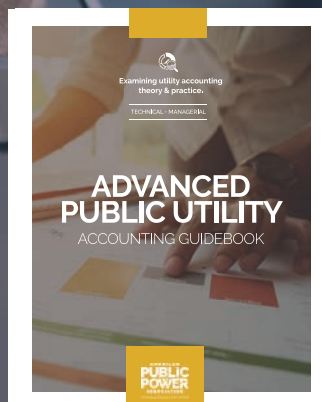
- ▲ Federal infrastructure funding
- ▼ Reduced need to sell debt due to improved finances
- ▼ Fewer ballot measures approved
- ▲ Low interest rates
- ▼ Low yields for investors
- ▲ Issuer credit quality

THREE WAYS TO CHECK YOUR UTILITY'S ACCOUNTING AND FINANCES



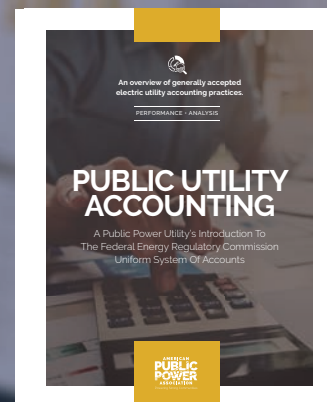
Financial and Operating Ratios

Assess your utility's financial performance and operational efficiency against your public power peers.



Advanced Public Utility Accounting

Examine your utility's cost allocation, rate design, budgeting, and internal controls.



Financial and Operating Ratios

A step-by-step introduction to accounting for public power systems.

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