



EXPECT THE UNEXPECTED

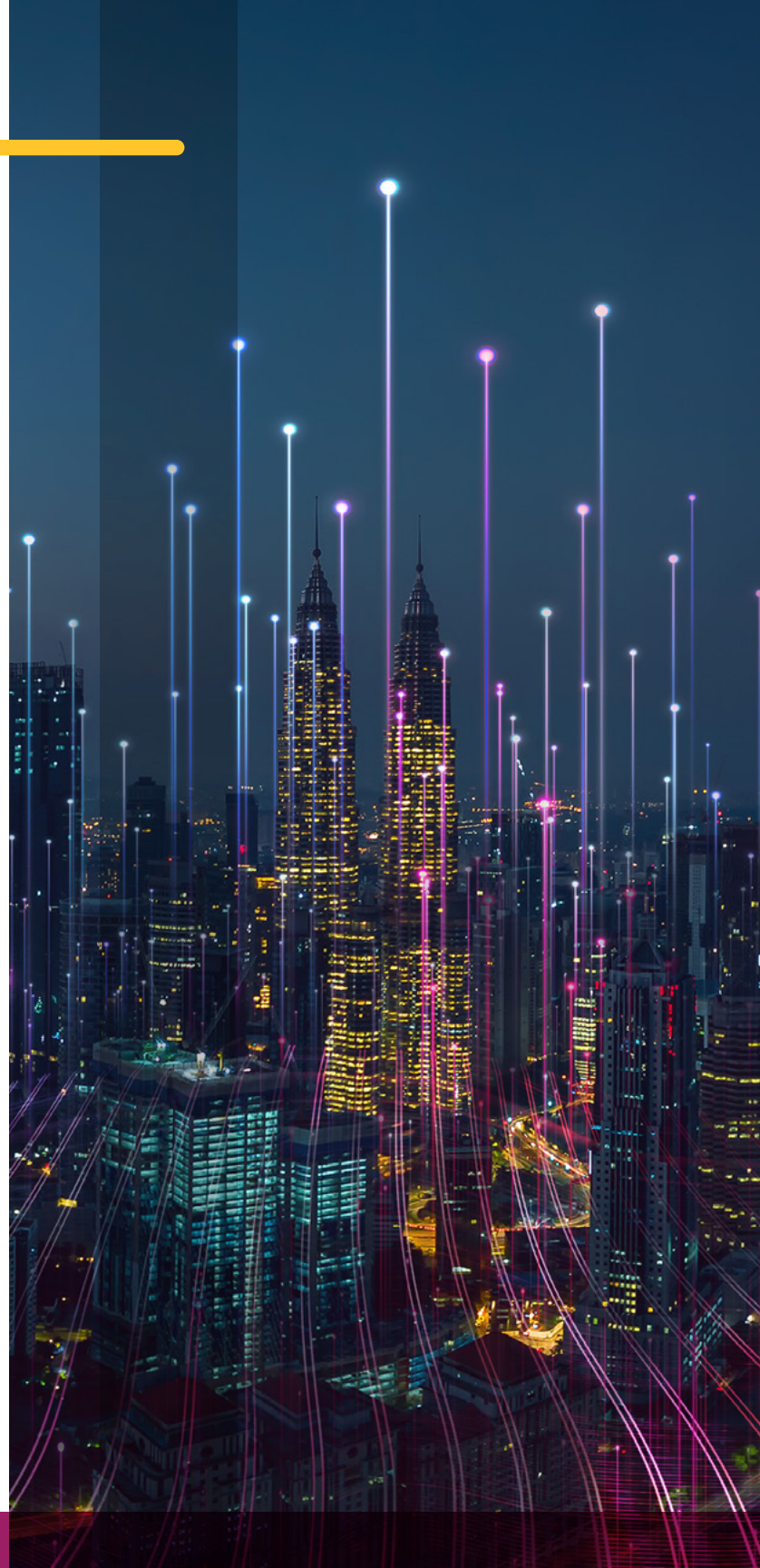
2020'S LESSONS FOR INNOVATION AND CONTINUITY



ABOUT THIS REPORT

In early May 2020, members of our conference advisory board responded to a questionnaire regarding the impacts of COVID-19 on their companies. They shared how the pandemic changed day-to-day operations, shifted priorities and re-oriented strategic planning in near and long terms.

Five months later, in advance of our conference, the advisory board answered three follow-up questions. This document summarizes how innovation helped to evolve pandemic responses for the utilities represented, and how the pandemic accelerated or paused certain initiatives. It also looks beyond COVID-19 to understand where the most significant innovations are taking place in the industry.



EXECUTIVE SUMMARY

THE RAPID RESPONSE

When the threat of the COVID-19 virus became apparent in the spring of 2020, utilities across North America scrambled to implement contingency plans. As with most organizations that halted business as usual, the primary goal was to keep employees and customers safe. But as essential services, utilities had to implement a range of responses that were appropriate for back-office personnel, field crews and critical employees. The industry had to maintain business as usual to the greatest extent possible, but also prioritized the safety and security of employees—and customers—as they fulfilled their role of delivering critical electricity, gas and water service.

Utilities urgently searched for personal protective equipment (PPE), fearing that illness might sideline entire shifts of critical employees, but were also aware of PPE shortages affecting hospitals and front-line medical workers. Some utilities quickly established connectivity that allowed call-center employees to work remotely, while others isolated entire teams in hotels for two weeks at a stretch. Meanwhile, everyone who could possibly work from home made the leap. IT support groups worked around the clock to build laptops and extend security measures, and field crews began evaluating what tasks they could perform safely while maintaining social-distancing guidelines.

THE MOTHER OF INNOVATION

Natural disasters highlight the necessity of flowing water and electricity. The pandemic didn't knock out distribution lines. But with millions of people working and schooling from home, and summer heatwaves fast approaching, utilities had to find creative solutions to deal with operational and business challenges. Not surprisingly, the industry (which is used to working under pressure) rose to the challenge, even finding areas of increased productivity through new routines and the lack of travel.

Field crews immediately halted all customer contact, until new protocols could ensure safe service visits. Fleet managers rented additional vehicles and began allowing crews to take vehicles home and report directly to work sites to reduce exposure. When crews did return to field offices, they submitted to regular temperature checks, met outdoors, and used assigned bathrooms and breakrooms to limit the potential spread of the virus.

Work-from-home employees were forced to go all-in with collaborative tools and video conferencing, completing a digital transformation that began years ago but still had pockets of resistance in some organizations. Teams established regular check-ins to remain synched on work. Many instituted simple games to keep things light while dealing with the blending of family and work stressors and receiving news about colleagues who contracted the virus.

EXECUTIVE SUMMARY

DEVELOPING A NEW NORMAL

After making it through the intense scramble, the industry set about establishing a new sense of normalcy. Executive teams held virtual town halls and distributed anonymous surveys to ensure they were hearing and meeting employee needs.

With millions of people out of work, customer and community needs also had to be addressed. Utilities suspended disconnects, extended payment dates, paused interest and collections, delayed rate increases, and stepped up repayment assistance and other engagement programs. They also made contributions to food banks, increased paid volunteering hours and matching gifts for employees. To provide economic stimulus and relief in their communities, utilities have instituted micro-loan programs for nonprofits and established funds and energy efficiency grants for small businesses.

Commercial and industrial consumption dropped radically and was only partially offset by the uptick in residential energy and water usage. With a close eye on expenditures, utilities halted most new infrastructure construction and used the opportunity to catch up on maintenance. Unavoidable hiccups in schedules and agreements made good-faith relationships with vendors and unions more important than ever.



EXECUTIVE SUMMARY

LESSONS FOR CONTINUITY

In a survey of executives' and customers' top concerns for the *2019 Itron Resourcefulness Report on Disaster Preparedness*, global pandemic didn't even make the list. Yet some utilities did have specific continuity plans for the scenario that played out, and others modified relevant sections of different plans. The report notes that disaster preparedness is not a one-time activity, but rather a self-reinforcing lifecycle in which response and recovery activities inform and improve future preparations.

The importance of good communication has been undeniable in overcoming the challenges posed by COVID-19. New and established channels for two-way communication have helped keep leadership, staff, customers, vendors and unions on the same page. Advanced grid technologies also proved valuable in monitoring the shift in consumption patterns, enabling remote service connections, and prioritizing the work of field crews.

Perhaps the biggest takeaway is a new sense of confidence from the industry's demonstrated ability to achieve higher levels of agility, collaboration and innovative problem-solving. Joe Thomas, chair of our conference advisory board spoke to this:

“ *Whether it be PPE access, ability to scale IT systems quickly, or finding creative ways to continue to meet our commitments many changes have helped prepare for future disruptions.* ”

LOOKING BEYOND THE PANDEMIC

While some implementation timelines have shifted or paused, utilities report continued commitment to the modernization initiatives outlined in the *2018 Itron Resourcefulness Report*. This includes technology solutions for better customer experiences, the integration of more renewable energy, greater grid efficiency and cybersecurity, as well as smart city capabilities.

Leadership teams are weighing the benefits of work-from-home against bringing employees back into offices. The process includes re-evaluating real-estate needs and making decisions about redesigning for greater social distancing or making permanent commitments to remote working. Either decision will involve significant changes to organizational cultures.

Itron has been on the same journey of response and recovery. Early challenges included enabling employees to work remotely and supporting those embedded with utility partners, as well as ensuring uninterrupted service of the critical tools and support used by utilities. Itron is proud of the resiliency of its industry relationships and is confident and focused in the continued delivery of innovative hardware and software solutions and support.

ORGANIZATIONAL INNOVATIONS

Utilities and vendors rapidly evolved pandemic responses to keep employees as safe as possible while providing continuity of service to millions of customers. Across the industry, everyone who could work from home made the transition in a matter of days, fully embracing collaborative tools and new routines for staying connected with teammates.

Critical employees rearranged control center workstations, staggered schedules and made commitments to quarantining in order to stay healthy and available for work. Field crews

swiftly eliminated customer contact and changed behavior patterns to reduce exposure to one another. The pause in business as usual allowed time for clearing maintenance queues and re-evaluating capital projects.

Ultimately, good communication was the foundation for success as contingency plans went into effect and invariably shifted. Trusted relationships with colleagues and vendors smoothed bumps in the road, and valuable digital transformations accelerated.

QUESTION 1:

After several months of adjusting to the COVID-19 pandemic, what organizational innovations (such as addressing business continuity, increasing the agility of your workforce/cross training, leveraging your smart grid/AMI investment, shifting near-term goals/focus, etc.) have proven most valuable in establishing new protocols and maintaining productivity?



ORGANIZATIONAL INNOVATIONS



JULIE MATTESON,

Western Area Power Administration (WAPA)

“WAPA believes communication is vital to maintain productivity. WAPA’s leadership is meeting regularly to discuss our COVID-19 response, take care of employees and keep the lights on for the communities who depend on us. Individual divisions have weekly meetings utilizing technology like Webex or Skype to keep their teams connected.”



DAVID MESZAROS,

FirstEnergy

“One key process change to our AMI deployment was the near-elimination of customer contact by replacing door knocking and door hangers with phone calls 1-2 days prior to installation, as well as a call on the deployment date.”



MIKE SMITH,

Maritime Electric

“We have created cohorts of workers that share workspaces and do not mix between the different cohorts. For example, our lineworkers are divided into groups and have assigned washrooms and new break areas. This has given us confidence that if a worker becomes ill, the contact tracing and the facilities involved will be limited.”



LYNETTE SEALY,

CenterPoint Energy

“Remote working has been a key innovation for our meter reading operation. About 90% of our drivers start and end the workday from home, and 100% of the support staff work remotely to import and export the collected data. Now, once the last meter is read, the upload process begins while the driver is heading home. This has allowed the Houston Electric IDR process to deliver its service-level agreement an hour earlier each day, which resulted in reduced overtime for the Revenue Accounting Billing department.”

PREPARING FOR FUTURE DISRUPTIONS

The challenges faced in 2020 have tested the industry's ability to respond to the unexpected. While working remotely and adjusting to new safety protocols in the field, many utilities have also had to weather major storms and civil unrest. Yet by and large, the industry has risen to the challenge, proving that it shines under pressure.

With so many challenges to overcome simultaneously, employees at all levels took ownership for the innovations

needed to perform their work safely and efficiently. They demonstrated inherent abilities to self-organize and collaborate across teams and business units.

Although difficult, the experiences of this year have instilled greater confidence in organizations across the industry. Remote working, staggered schedules and no-contact customer service have all proven viable. The lessons learned and protocols developed will serve utilities and vendors in responding to similar and new challenges in the future.

QUESTION 2:

Disaster planning requires a continuous lifecycle, as highlighted in the 2019 Itron Resourcefulness Insight Report. How has 2020 changed the way your organization is preparing for future disruptions?



PREPARING FOR FUTURE DISRUPTIONS



TRACY TINSLEY,
Duke Energy

“ I think utilities in general excel in crisis mode, as typically seen in weather disasters. However this unprecedented health pandemic also highlighted that our core strength of rallying to a significant disruption helped us adjust to the constantly changing pandemic rules and guidelines. Key functional groups (Emergency Preparedness, EHS, Cybersecurity) have strengthened training, communications and even added some new roles to stay prepared as we have learned from 2020.”



LYNETTE SEALY,
CenterPoint Energy

“ The pandemic has changed the attitude of employees and how we’re thinking of new ways to get the job accomplished, and do it safely. There’s been more innovation in the last six months than I have seen in many decades before the pandemic, and it’s happening through collaboration with all employees at all levels.”



RICK TEIGLAND,
Florida Power & Light (FPL)

“ For 2020, FPL has made significant adjustments with Emergency Preparedness to address the new challenge of COVID-19. Comprehensive guidelines were developed for staging site operations incorporating both CDC and Industry guidelines. This includes a revised footprint, health screening, and technology tests of critical health equipment and applications. Reinforcement of individual accountability to follow the CDC 5 pillars: Wearing a face covering, maintaining social distance, practicing good hygiene, avoiding crowds, and opting for the outdoors.”



LISA REILLY,
Peoples Gas

“ Essential’s Business Continuity Plan contains a pandemic “trigger” we have worked diligently over the years to keep up to date and test via tabletop drills. In many ways, this put us ahead of the game. As the 2020 pandemic unfolded, our Business Continuity Core Team members were immediately engaged and started a cadence of daily update meetings.”

“ Moving forward, the Essential IT team is looking at options that can support our business continuity efforts and disaster recovery process. We’re looking to standardize hardware where possible and to use the same systems and applications company-wide. These improvements also provide built-in backup should another pandemic or natural disaster occur.”

INNOVATION FOR THE FUTURE

Looking ahead, the industry is focused on human-centered innovation. This includes meeting the growing needs and expectations of customers, trusting employees to identify breakthrough ideas, and working collaboratively with stakeholders to capitalize on emerging market opportunities.

The digital transformation of the industry is also picking up steam. Across the board, utilities aim to better leverage data

to achieve a host of operational and marketing goals. From integrating distributed energy resources (DERs) and meeting energy efficiency goals, to rolling trucks more judiciously and motivating greater customer engagement, advanced analytics are expected to transform growing amounts of data into actionable insights and use cases.



QUESTION 3:

In 2021 and beyond, how and where does your organization expect to drive the most innovation in your business?

INNOVATION FOR THE FUTURE



JOE THOMAS,
Duke Energy

“With COVID-19, the customer needs are only further expanded, giving us a great responsibility to provide solutions that improve their utility experiences.”



JULIE MATTESON,
Western Area Power Administration (WAPA)

“Senior leadership promotes innovation throughout the organization and provides opportunities to staff members on all different levels to participate. This includes work details, individual leadership programs, cross-training, committee involvement and workshops.”

“Surveys have also proven valuable this year, providing staff a safe and confidential way to voice their opinions. These have helped the agency leadership understand how employees are working through the COVID-19 pandemic and how the agency can prepare for the future.”



RICK TEIGLAND,
Florida Power & Light (FPL)

“FPL expects to drive the most innovation in 2021 and beyond by continuing to leverage technology to provide more intelligence from the grid and continuing the journey to identify issues early that predict outages and provide the information needed to prevent an outage to the customer.”



LISA REILLY,
Peoples Gas

“The following initiatives are being implemented or are in development across Peoples Natural Gas, Essential’s natural gas division:

- » Text-to-serve option for customer service
- » Aerial line mapping using drones from ULC Robotics
- » Tracking & Traceability documentation via GIS mapping
- » Combined Heat and Power (CHP) systems for electric generation, including at Pittsburgh International Airport and Allegheny General Hospital satellite
- » Renewable Natural Gas (RNG) sourced from landfills and anaerobic digestion (agricultural waste)
- » Fleet development using natural gas vehicles (NGV) deployment”

CONFERENCE BOARD BIOS

Each year, our advisory board plays an integral role in shaping programming at our customer-focused event in the fall by sharing their insights about industry trends, challenges and opportunities. The board is comprised of representatives who serve in a variety of roles across electricity, gas and water utilities.

The findings in this report were collected through surveys with our board members.



DAVID MESZAROS,
FirstEnergy
Advisory Board Co-Chair

David Meszaros is **Manager of Smart Meter Programs** for FirstEnergy. He's responsible for the implementation of smart meter systems and providing support for regulatory filings.



NICK MILLER,
Southwest Gas

Nick Miller is a **Systems Analyst for Field Application Support** at Southwest Gas. He provides training, help-desk support, system upgrades and facilitates business decisions related to meter-reading technology.



JOE THOMAS,
Duke Energy
Advisory Board Chair

Joe Thomas serves as **Managing Director of Solutions Development** for Duke Energy's Market Strategy and Solutions organization. He is responsible for delivering new and innovative products and services to meet customer needs and provide growth opportunities for the company.



DENNIS DEMERA,
Las Vegas Valley Water District (LVVWD)

Dennis DeMera is **Manager of Customer Care and Field Services** for LVVWD. His responsibilities encompass technologies for data collection, water conservation, customer service and customer engagement.



DEREK LEBOEUF,
City of Ottawa

Derek LeBoeuf serves as **Business Consultant** for Revenue Systems and supports a new water billing system that features self-serve, online services for residents. He administers and supports three operational units from the meter-to-cash function.

CONFERENCE BOARD BIOS



DEAN MARTIN,
Consumers Energy

Dean Martin is **Supervisor of the Smart Energy Operations Center** that manages smart electric meters and gas communication modules across Consumer Energy's service territory.



STEVE MILLER,
Charlotte Water

Steve Miller is **Chief of Customer Service** responsible for Charlotte Water's metering system, account services, new service connections, field services, revenue recovery and backflow program.



TRACY TINSLEY,
Duke Energy

Tracy Tinsley is **Project Director for AMI meter deployment programs** in Duke Energy's Indiana, Ohio, Kentucky and Florida service territories.



JIM ROBINSON,
Peoples Gas / North Shore Gas

Jim Robinson is **Director of Meter to Bill** for Peoples Gas and North Shore Gas. He manages AMR and AMI teams and strategy for approximately 1 million meters across Illinois.



JULIE MATTESON,
Western Area Power Administration (WAPA)

Julie Matteson is **Settlements and Power Billing Manager** for the Upper Great Plains Region of WAPA, one of four power marketing administrations within the U.S. Department of Energy.



LORIE SHELLENDER,
Pepco Holdings

Lorie Shellender is **Manager of Energy Efficiency Programs** at Pepco Holdings. She oversees Energy Wise Rewards, a direct load control program of nearly 400MW with more than 350,000 active participants.

CONFERENCE BOARD BIOS



RICK TEIGLAND,
Florida Power & Light (FPL)

Rick Teigland is **Manager of the Reliability Grid Automation team** at FPL. He is responsible for the overall strategy and deployment of grid automation devices.



LYNETTE SEALY,
CenterPoint Energy

Lynette Sealy (Houston) is **Director of Meter Reading and Work Order Management** for CenterPoint Energy. She is also a board member of the United Energy Credit Union.



BILL WESTRICK,
Exelon

Bill Westrick is **IT Manager of Field Area Network Operations** for Exelon's Utility Communications group. He's responsible for the Itron AMI and DA networks for five Exelon utilities.



MIKE SMITH,
Maritime Electric

Mike Smith is **Supervisor of the IT and GIS development teams** at Maritime Electric, which provides electricity to customers on Prince Edward Island.



LISA REILLY,
Peoples Gas

Lisa Reilly is **Director of Continuous Improvement and Meter Reading** at Peoples Gas, a natural gas distribution company serving southwestern Pennsylvania, West Virginia and Kentucky.



ROBERT KANG,
Sacramento Municipal Utility District (SMUD)

Robert Kang is **Billing Operations Manager** for SMUD. He's responsible for monitoring and maintaining the meter-to-cash systems.



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CORPORATE HQ

2111 North Molter Road
Liberty Lake, WA 99019 USA

Phone: 1.800.635.5461

Fax: 1.509.891.3355

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