Supporting our clients with initiatives for safe operations and continued energy reliability and resilience.
Utilities now more than ever will need to be smarter and have more flexible grids. This includes a diversity of distributed generation to increase reliability, performance and efficiency of their operations.

Utilities are already familiar with managing disruptions but now they are facing unprecedented challenges. Secure, reliable power is always needed but flexibility is vital now to deploy resources safely and facilitate the shifting need of energy demand. With the pandemic, we have seen utility revenue streams change; heavy load centers for manufacturing and commercial operators have now shifted to support residential needs and people working from home. Additional shifts can be anticipated as economic activity returns.

Looking ahead, utilities will have choices to make:
- What immediate steps should be taken to create a safer work environment for their employees, customers and stakeholders?
- What processes need to be executed to sustain continued success and support energy resilience in the face of future shocks and stressors?
- And what new business models and solutions can be implemented without compromising the overall fiscal and economic viability of the organization?

AECOM CAN ASSIST WITH CREATING A ‘BETTER NORMAL’.

Through business model transformations and regulatory utility redesign, we have the expertise and technologies to provide a rapid assessment of data sources to better understand the current situation and enable confident decision-making that can optimize system performance, cost and risk, and the resulting long-range distribution. We employ comprehensive scenario planning tools and techniques that test “what if” assumptions to inform critical strategies and approaches for utility planning and infrastructure design.
PLANNING FOR RETURN TO WORK

Keeping employees safe in a new normal

Utilities have continued to provide safe and reliable power throughout the pandemic and have adjusted their work practices at the same time they have helped their communities and customers return to service. New organizational structures are being created as a prioritization strategy for determining the safest and most beneficial, lowest risk return pathway.

With many employees working from home, cybersecurity is now an elevated concern, with potential vulnerabilities to enterprise systems particularly as utility personnel work remotely. Safeguarding critical infrastructure, from power grid networks to industrial control systems, requires innovative technologies, tools, and techniques to reduce risks posed by cyber and other emerging threats.

One thing we know to be true: from great challenge comes great innovation, and innovation is now certainly underway. As a resilient society, we will emerge from this pandemic with a transformed set of values and renewed emphasis on protecting the most important aspect of our organizations—our people.

AECOM IS LEVERAGING OUR INDUSTRY LEADING KNOWLEDGE OF PUBLIC HEALTH AND SAFETY ACROSS ALL FORMS OF BUILT ENVIRONMENTS.

Combined with our expertise in energy scenario planning, virtual public consultation and capital planning, AECOM is helping utilities and communities monitor and adjust their service provision, and plan for evolving energy needs. We will continue to update our project safety procedures to protect our employees, subcontractors, and vendors who perform work on our energy efficiency programs.
AECOM is now advancing the traditional, on-site presence assumptions of how to serve customers through utility incentive programs. In the wake of social distancing, AECOM has employed virtual audits to support the execution of energy efficiency programs. With access to wi-fi and a device that can video conference, AECOM can conduct virtual energy assessments of customers’ facilities. The effectiveness of this approach, particularly for programs that help customers manage and reduce energy costs, is more critical than ever to overall economic recovery.

**VIRTUAL AUDITS**

**CONTINUOUS AND ONGOING COMMISSIONING SERVICES**

With our continuous and ongoing commissioning services, our energy engineers act as data scientists, mining large datasets to find ways to optimize operations by analyzing infrastructure performance. In fact, with the shutdown of facilities, now is the perfect time to re-evaluate operations and look for opportunities to upgrade or convert facilities into more advanced usage. Through tools like real-time data analytics platforms, AECOM can provide building insights, revealing hard-to-find energy reduction opportunities that simply cannot be uncovered in conventionally controlled HVAC systems.

**MONITORING-BASED COMMISSIONING SERVICES**

Our monitoring-based commissioning services can also be used to combat the chronic degrading of energy-saving measures through fault detection, ensuring an increased projected rate-of-return of energy investments.

**VIRTUAL CONSULTATION**

Other innovative applications like AECOM’s interactive virtual consultation tool provides an opportunity to engage and consult with a wide audience from any computer or mobile device at any time during the consultation period. These platforms are designed to ensure constructive conversations among all stakeholders.

Utilities must look for new strategies to deliver a premiere customer experience.

Many traditional utility programs emphasize in-person interactions, but the current pandemic has challenged how utility programs are designed and delivered.
Adjusting capital programs to increase flexibility and build resilience

Decarbonization and digitalization have both been steady drivers for energy’s transformation and no doubt, making the electric grid smarter and cleaner can play a key part of economic recovery from the pandemic. From non-wires alternatives, electrification of buildings and transportation, and to ultimately a zero-carbon grid, planning strategies will be critical to developing an ecosystem that can leverage opportunities for its growth and scalability. Indeed, rethinking the approach to capital planning is one of the most important initiatives in understanding of the viability of current assets, the prediction of future market trends and implications of capital investment decisions.

As customers now look to improve both resilience and efficiency of their energy resources, utilities are leveraging their infrastructure to create ‘smart’ and connected communities. AECOM finds a balance of the social, environmental and financial impacts to the triple bottom line. Our approach is built on investments to expand utility business models, promote coordinated community initiatives and integrate clean generation.

AECOM can also assist with changing resource needs and planning. An advanced suite of forecasting, system planning, and program development tools have been created to harness the power of smart meter data, GIS, and customer information systems to generate more accurate and insightful forecasts. AECOM has successfully completed studies that assess various scenarios and recommended several operational and business practices that may be adopted by utilities. Ideally, these plans can provide information that will be used to direct utility operations, business policies, and programs that may support customer expectations and preferences.
Driving innovation to reduce risk and enhance energy services

From pioneering digital design to developing our own custom software and innovative solutions, we bring the best minds together to solve our clients’ biggest energy challenges. Indeed, technology is being leveraged to reduce risk and enhance utility services. These tools can provide precise load forecasting to mitigate service interruptions and can also bolster utilities’ internal processes, potentially leading to reduced prices and improved service long after the pandemic ends.

**ADVANCING INVENTORY MANAGEMENT**
Leveraging cameras on overhead utility poles, for example, can accelerate inventory management and condition assessments – ultimately providing better control of neighborhood-level assets and more robust customer-side energy performance to changing space use. We have also seen success with the installation of intelligent lighting and advanced video monitoring on streetlights to manage real-time energy consumption, public safety and data driven city policies.

**RECALIBRATING AIR QUALITY IN BUILDING SYSTEMS**
Of particular concern now and into the future will be the importance of air quality to human health. AECOM is able to audit and rebalance existing HVAC systems to maximize outdoor air intake and increase the supply of fresh air to occupied spaces, particularly when common systems service multiple tenant spaces. We can redesign ventilation systems to maximize outdoor air, reducing the risk of recirculating pathogens and adjust building cores and air handling units accordingly.

**INTEGRATING STRATEGIC ENERGY PORTFOLIO PLANNING, DESIGN, AND DELIVERY**
For larger infrastructure investments, AECOM’s Rosetta platform empowers owners to better understand the threats, vulnerabilities, and impacts that stem from an organization’s inherent dependence on energy, creating an optimized road map to achieve a resilient energy future. Rosetta clarifies the energy impacts and financial complexities of various energy conservation measure combinations and creates “what if” scenarios to demonstrate the impacts of project options based on life cycle cost, return, and sustainability metrics.

AECOM USES INNOVATIVE SOLUTIONS TO SOLVE OUR CLIENTS’ MOST COMPLEX CHALLENGES AND TRANSFORM COMMUNITIES.

Asset inspection through immersive imagery applies artificial intelligence developed by AECOM to Google Street View images to create a machine learning model that recognizes, classifies and evaluates the condition of assets.
AECOM believes that connected and smart communities are about more than technology and infrastructure. A community is smart when its integrated systems solve challenges and improve the quality of life for people who live, work, and play there. Our people-first planning approach allows AECOM to build an understanding of the unique challenges and opportunities of a community to then determine the appropriate solutions — whether they are technology installations and infrastructure build-outs or policy and process changes. For ComEd’s Bronzeville Community of the Future and Microgrid Support, AECOM has leveraged smart solutions to foster growth and meet new challenges related to cyber security, resilience, and climate change while working to achieve goals cost-effectively.

Electrified transportation is growing significantly each year, spurred by awareness of environmental benefits and lower costs. AECOM is supporting cities, states, fleet owners, and utilities by adapting utility and transportation networks with infrastructure modernization and improvements. Recently, AECOM assisted the local utility in accessing business strategies and distribution/operational plans for expanding customer demand for plug-in electric vehicle (PEV) charging services in the City of Roseville. This study will be used to create an electric utility business plan for the utility’s response to customer PEV demand. Ideally, this plan will provide information that will be used to direct utility operations, business policies, and customer program development that will support customer expectations and preferences, facilitating the utilization of PEVs in the City of Roseville.

AECOM is proud of its long history of managing utility incentive programs and offering turnkey energy efficiency services to customers — increasing overall efficiency, conserving energy, and saving money. Leading Eversource’s Small Business Energy Advantage program, our team of energy analysts and engineers has executed some of the most comprehensive energy efficiency projects, continually investigating new technologies and ways to deliver even more cost-effective and energy-efficient projects to Eversource customers. The Eversource SBEA program has consistently held a top spot in ACEEE’s United States Energy Efficiency Scorecard.
EXPERIENCE WHEN IT MATTERS MOST

Monitoring Based Commissioning
Client: Tishman Speyer/The Franklin
Location: Chicago, Illinois

AECOM’s monitoring-based commissioning (MBCx) services reveal hard-to-find energy reduction opportunities that simply cannot be uncovered in conventionally-controlled HVAC systems. Our MBCx services are also used to combat the chronic degrading of energy-saving measures through fault detection, helping our clients ensure 100 percent of projected rate-of-return on their energy investments. AECOM successfully completed a MBCx project for The Franklin a 2.5 million square foot property, and established protocols to analyze HVAC performance data for points monitored by the building automation system. The team highlighted operating anomalies, and uncovered permanent energy-saving opportunities achieving annual electricity savings of nearly six million kilowatt-hours per year.

Digitalizing Utilities
Client: New York Power Authority
Location: Various, New York

Sensor deployment programs incorporate new technologies to perform online monitoring of components in power plants, substations, and power lines to increase efficiency, reliability and improve resiliency of power networks. AECOM has been involved in the New York Power Authority’s (NYPA) Sensor Deployment Program covering over 20 NYPA plants/substations. This program will help NYPA collect data more quickly, accurately and allow for a faster response time to outages and other power grid issues. This is accomplished through regional as well as sophisticated central monitoring and communications in White Plains, NY. AECOM was also the Engineer of Record and Program Manager for the Integrated Smart Operations Center, NYPA’s emergency control center. These initiatives have advanced the transformation of the state’s power system into a state-of-the-art digital network — moving

AECOM has been delivering solutions that address some of the biggest issues of today and are now adapting for a new tomorrow. Given our expertise, breadth of knowledge and stability, AECOM is in an exceptional position to support clients to meet immediate, medium- and long-term needs.
Annika Moman
Senior Vice President, Energy Business Line Executive
Annika Moman leads AECOM’s Energy business line in North America, providing innovative and practical energy solutions to utilities and public and private sector users. This includes distributed generation, gas utilities, smart energy, and energy efficiency retrofit projects. She has held progressive management roles in the energy industry including energy master planning and energy savings performance contracting. As a visionary leader and strategic thinker, Annika is often called upon to participate as a speaker and panelist in power and energy related industry forums and roundtables. In her role as senior vice president, she provides corporate commitment and access to the resources required for a large portfolio of energy projects. She oversees programs in a leadership capacity, bringing oversight, guidance, and strategic direction to meet client expectations.

michael.house@aecom.com
301-357-2268

Mark Lonkevych
Vice President, Energy Project Delivery Business Unit Lead
Mark Lonkevych is responsible for the strategic direction and day-to-day operations of the Energy Services Project Delivery business. Mark’s technical background includes energy conservation, renewable energy, fossil generation, retail and wholesale energy, central plants, and smart grid technologies. He has been involved with developing, structuring, financing, and installing power and energy projects ranging from small commercial to utility scale systems — working with public and private sector energy users and utility companies. His transaction experience includes utility energy services contracts, federal and commercial energy savings performance contracts, energy services agreements, power purchase agreements, and utility incentive programs.

mark.lonkevych@aecom.com
610-304-4026

Bill Abolt
Vice President, Smart Energy Practice Leader
Bill Abolt leads AECOM’s Smart Energy practice and focuses on energy, sustainability and smart, resilient urban infrastructure in the largest metropolitan economies in North America. He has over 33 years of experience managing complex environmental, energy and public issues and programs. Bill has successfully developed, administered and implemented comprehensive energy and sustainability programs for utilities, government and private clients over his career. Prior to joining AECOM, Bill served as Environment Commissioner, Director of the Office of Budget and Management and Chief of Management, Office of the Mayor, for the City of Chicago, where he was responsible for developing Chicago’s strategy to become one of the greenest cities in the nation.

william.abolt@aecom.com
773-428-2098
About AECOM

AECOM is the world’s premier infrastructure firm, delivering professional services throughout the project lifecycle—from planning, design and engineering to consulting and construction management. We partner with our clients in the public and private sectors to solve their most complex challenges and build legacies for generations to come. On projects spanning transportation, buildings, water, governments, energy and the environment, our teams are driven by a common purpose to deliver a better world. AECOM is a Fortune 500 firm with revenue of approximately $20.2 billion during fiscal year 2019.

See how we deliver what others can only imagine at aecom.com and @AECOM.

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CONTACT
Annika Moman
Senior Vice President
Energy Business Line Executive
E annika.moman@aecom.com
P 760-533-1492