



# 4 forces shaping US utilities in 2023

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The combination of challenge and opportunity means that utilities – more than ever before – must make tough decisions about where to focus.

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## In brief

- ▶ Consumers' interest in clean energy and energy efficiency is being fueled by rising prices and market disruption.
  - ▶ Transforming the customer experience is essential to survival for utilities companies.
  - ▶ Utilities leaders should choose a path that best suits their organization's strengths and market position.
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In 2023, US utilities industry have a multi-prong ambition to realize: how to provide reliable, affordable and sustainable energy or safe water to customers. However, increased pressure around decarbonization and the adoption of cleaner energy sources, electrification and related infrastructure needs, and customer-driven disruption will make this energy trilemma even more difficult to balance.

For now, many utilities feel a sense of urgency around these challenges and the related energy transition, but change won't happen overnight. Capital only goes so far, and keeping costs low to avoid rate hikes in a down economy is critical. At the same time, reliability and resiliency underpin the utility's license to operate and can't be ignored. Ensuring an equitable transition will take time and a broad array of energy sources. And as the market evolves, new players – with new capabilities – are entering the playing field and will continue to do so, adding even more complexity.

Utilities must determine today how and where they will play – both in the short and long term – and focus their investments and resources on four no-regrets actions to enable that strategy.

# 1

## Reimagine the energy customer dynamic

**Energy providers must keep pace and overcome challenges of reliability, affordability and equity.**

EY research of 70,000 consumers across 18 regions over the last two years found that consumers are not just ready for change, they are leading the way. Rising prices and market disruption have fueled their interest in clean energy and energy efficiency and helped accelerate adoption of new solutions like electric vehicles and rooftop solar.

At the same time, volatility has taken a toll on consumer confidence in an industry that for years has been taken for granted. Since 2021, more than 80 energy providers have gone out of business in competitive markets. Further, newsworthy disruptions in service due to adverse weather events – like the numerous wildfires, heat waves, freezes and storms across the US recently – only add to consumers' perceptions that they might not be able to count on their local utility.

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To overcome these challenges and build for a new energy future, transforming the customer experience is now essential to survival. While understanding their unique customer base is vital, there are six key questions that utilities industry should ask as they consider this transformation:

1. How are we creating effortless experiences for customers to engage with us?
2. Are our customer operations agile enough as channels diversify, digitization advances and energy solutions expand?
3. How can new technology and data empower our customer strategy and differentiate the experience?
4. Is our workforce strategy and [employee experience](#) aligned to our customer approach?
5. How are we thinking differently about programs, products and services that deliver value for consumers, the organization and the planet?
6. Given customers' prioritization of sustainability, how are we greening our own operations?

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## How EY can help

### [Customer Experience Transformation solution](#)

As the energy transition accelerates, what customers want - and the world needs - from ...

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## 2 Balance decarbonization ambitions with grid resilience

### Utilities industry must determine how to balance investments.

The foundation of any utility is providing reliable service, be it keeping the lights on or safely providing gas or water. That's increasingly difficult in a world where service disruptions due to weather and increasing electrification make resiliency and reliability a major challenge. Further, the very nature of the electric grid is dramatically changing from the traditional hub-and-spoke design to a decentralized grid that enables distributed energy resources and two-way flow.

Undergrounding transmission or distribution infrastructure, interconnecting decentralized renewable resources, moving back-office systems to the cloud and transitioning fleets to electric vehicles are just a few capital-intensive, but critical, projects to help utility companies move forward. These needs are also competing with dramatically higher commodity costs that put pressure on rates.

On top of all of that, new regulations around climate disclosures will require increased investments to enable accurate and transparent environmental, social and governance reporting. For example, right now, asset data has

been used for system planning, operations and scheduling inspections. However, new regulations will require this asset data to be used for reporting emissions.

An additional area of pressure impacting grid investments is related to energy equity among stakeholders – verifying that improvements to the grid benefit all consumers and that lower-income households have access to affordable energy and green options. For example, a utility today that invests in electric vehicle recharging stations that primarily benefit wealthier customers – while ignoring reliability issues that primarily impact vulnerable communities – will damage their standing with both consumers and regulators.

Utilities must be smart with their capital spend, first ensuring that they are investing properly in secure, stable infrastructure. And they must maximize operational efficiency and reduce costs to keep rates as low as possible for the benefit of consumers. Electric utilities must also appropriately manage the types of power they supply. While the shift to renewables is important, it must be done in a manner that protects prices to benefit consumers. Balance is the key; in some cases, it may make sense to continue in the near term with traditional sources of power to ensure that affordable energy is accessible to all.

Water utilities are not immune to challenges. Addressing aging water and wastewater infrastructure is critical, and many utilities face looming supply shortages due to population growth and a hotter, drier climate. And natural gas utilities must cope with many of the same issues as their electric power counterparts.

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# 3 Enable transformation with technology

Both digital and data capabilities in utilities industry have lagged but are essential to move forward.

Recognizing these diverse challenges, some utilities are moving quickly to leverage technology – both digital capabilities and data – to propel them toward a new future.

One example of a company that is progressing this view is Xcel Energy, which is using technology –and the data it can provide – **to respond to changes in customer behavior**. Xcel Energy uses smart meters that gather usage data every 15 minutes and a smartphone app to allow customers to track and adjust their usage patterns. Customers can see the cost of the power they use in real time and identify if renewably sourced energy is available.

A recent EY survey conducted across a segment of the utility industry shows that power and utility executives see the value in data as an asset, recognizing that it can support innovation, efficiency and predictive maintenance as well as help identify both short- and long-term trends that utilities industry can use to plan for alternate scenarios – vital in resiliency planning.

But in general, many utilities are at the nascent stages of establishing a modern data plan. They aren't completely comfortable with the vast amounts of data digital technology makes possible and how it should be used. They lack the ability to gain a clear picture of consumer behavior or how assets will perform. It's an area of significant opportunity for utilities to improve upon.

At some utilities, there is also a well-founded fear around data security and cyber attacks, especially in relation to smart grid technologies. The US government has been continuously working to create funds for cyber protection in its 2023 defense bill to help provide protection of the critical infrastructure from external cyber attacks.

Nevertheless, a high level of vulnerability remains, with even the health care and energy sectors implementing security measures as per mandates. The Federal Energy Regulatory Commission (FERC) has proposed to offer financial incentives, including a return on equity adder of 200 basis points to

electric utilities that invest in cybersecurity beyond existing requirements. However, several commissioners raised arguments to make these enhancements mandatory instead of incentive-based to limit the financial impact on consumers and reduce weak links in the system.

Regardless, the need for high-quality data – and the security resources to protect it – will only become more pressing at all public utilities.

# 4 Create the business of the future

Change may be slow, but new business models, strategy and portfolios offer opportunity.

Recognizing these diverse challenges, some utilities are moving quickly to leverage technology – both digital capabilities and data – to propel them toward a new future.

The challenges facing utilities today are significant. But there are also plenty of opportunities.

For example, the last half of 2022 saw an uptick in mergers and acquisitions (M&A) across the sector, with **21 deals** worth US\$3.72 billion in the third quarter alone. Most of that M&A activity was centered on investments in solar and wind portfolios, but renewable natural gas is also emerging as a core investment area. EY teams expect to see both corporate and financial investors continuing to aggressively evaluate renewable energy opportunities in 2023.

The Inflation Reduction Act (IRA) of 2022, which provides significant incentives for investing in renewable energy and clean technologies, is also spurring interest in power and utilities.

The law extends tax credits with incentives for wind, solar, carbon sequestration, clean hydrogen, nuclear and other technologies. The IRA targets US\$369 billion investment in energy and climate over the next decade and is expected to drive a cumulative capital investment of more than US\$4.1 trillion in the US energy supply infrastructure.

Given the IRA's financial backing, it is almost certain that the investment demand outlook for renewable infrastructure and cleantech will continue to be strong. Plus, the rapid adoption of clean energy goals by major companies means that investing in renewable assets and infrastructure has become a priority across many industries. Distributed energy resource systems such as microgrids and small-scale renewables are also growing in popularity, both as a strategy for increasing resiliency and to improve the cost-effectiveness of clean energy.

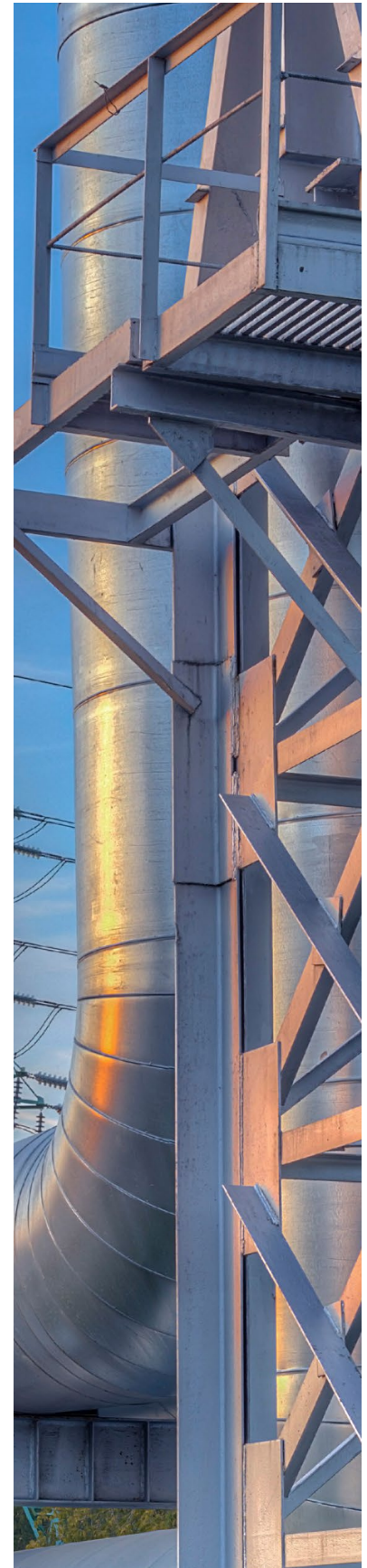
Together, these growth initiatives give utilities industry a variety of options for participating in an evolving new marketplace: they can invest in the buildout of renewable assets and infrastructure (including electric vehicles), utilizing incentives from the IRA; they can invest in developing the software and technology needed to manage these assets; or they can build out capabilities in the related services required to support these investments.

In short, there are a wide range of viable business models available, and utilities have the benefit of an embedded base of assets, capabilities and customers. Utilities can use their expertise and built-in knowledge to get a jump start on emerging opportunities, or partner with new players to take advantage of unique skill sets their organization doesn't possess.

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## Summary

The number of strong challenges facing the industry – combined with valuable, future-oriented opportunities – can be overwhelming. It's impossible for a single utility to be all things to all stakeholders, and leaders must choose a path that best suits their organization's unique strengths and market position. To move forward successfully, utilities must develop a detailed point of view on what their customers want; understand and incorporate what regulators expect; determine and progress a strategy on what the organization and its offerings will look like in the short- and long-term; and build out the asset and capability base to support those strategies.



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