



Disrupting partners

**The case for utilities to embrace new
energy providers**

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Disrupting partners

The case for utilities to embrace new energy providers

There has been a lot of speculation in the market about the utility “death spiral” resulting from retail product and service providers. This may have been hyperbole, but new entrants are engaging utility customers directly and claiming revenues that utilities otherwise could have retained. KPMG LLP (KPMG) believes that utilities that become Network Integrators have the best chance of avoiding such a spiral by embracing new entrants. Furthermore, utilities can reverse this disintermediation and add value to their customers by coordinating with these entrants, providing connections, and enabling innovation.

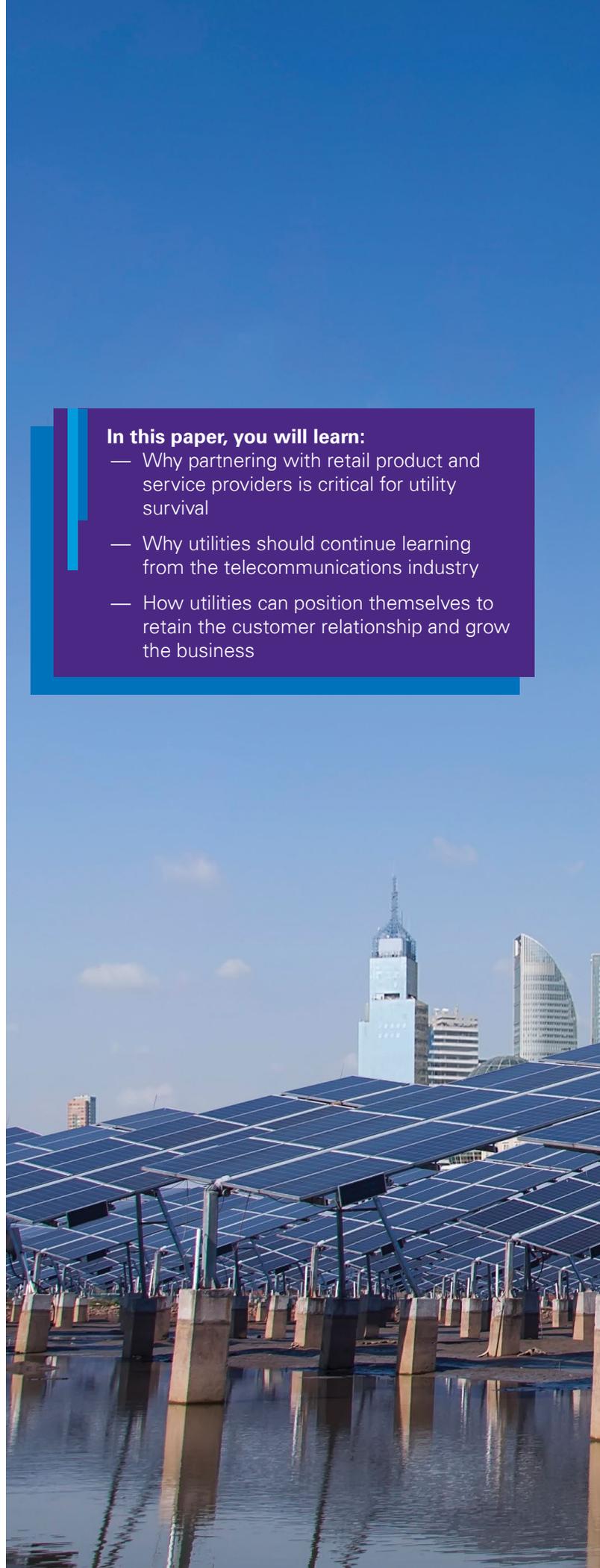
Electric utilities have existed for over 100 years and have faced a series of disruptions from new technologies and changing regulations. Retail product and service providers are a relatively new disruption. Utilities have been working with these new entrants, many of which are not traditionally part of the energy ecosystem, to deploy products and services to drive efficiencies in energy delivery and consumption.

To this end, a new model is emerging, where utilities expand their role as Network Integrators, enabling a channel that brings new products and services to consumers. This model is a natural fit for utilities. Most utilities want to remain as their customers’ “trusted advisers,” and customers want their utilities to serve in that role. The utilities’ hundred years of experience gives comfort that they can be a stable partner in a rapidly changing product world.

The telecommunications industry provides some valuable parallels, both in how they set up and manage partnerships and in how they manage the customer relationship. While many utilities’ partner programs share some key characteristics with telecommunications companies, there may be additional lessons for utilities looking to grow their position as Network Integrators.

In this paper, you will learn:

- Why partnering with retail product and service providers is critical for utility survival
- Why utilities should continue learning from the telecommunications industry
- How utilities can position themselves to retain the customer relationship and grow the business





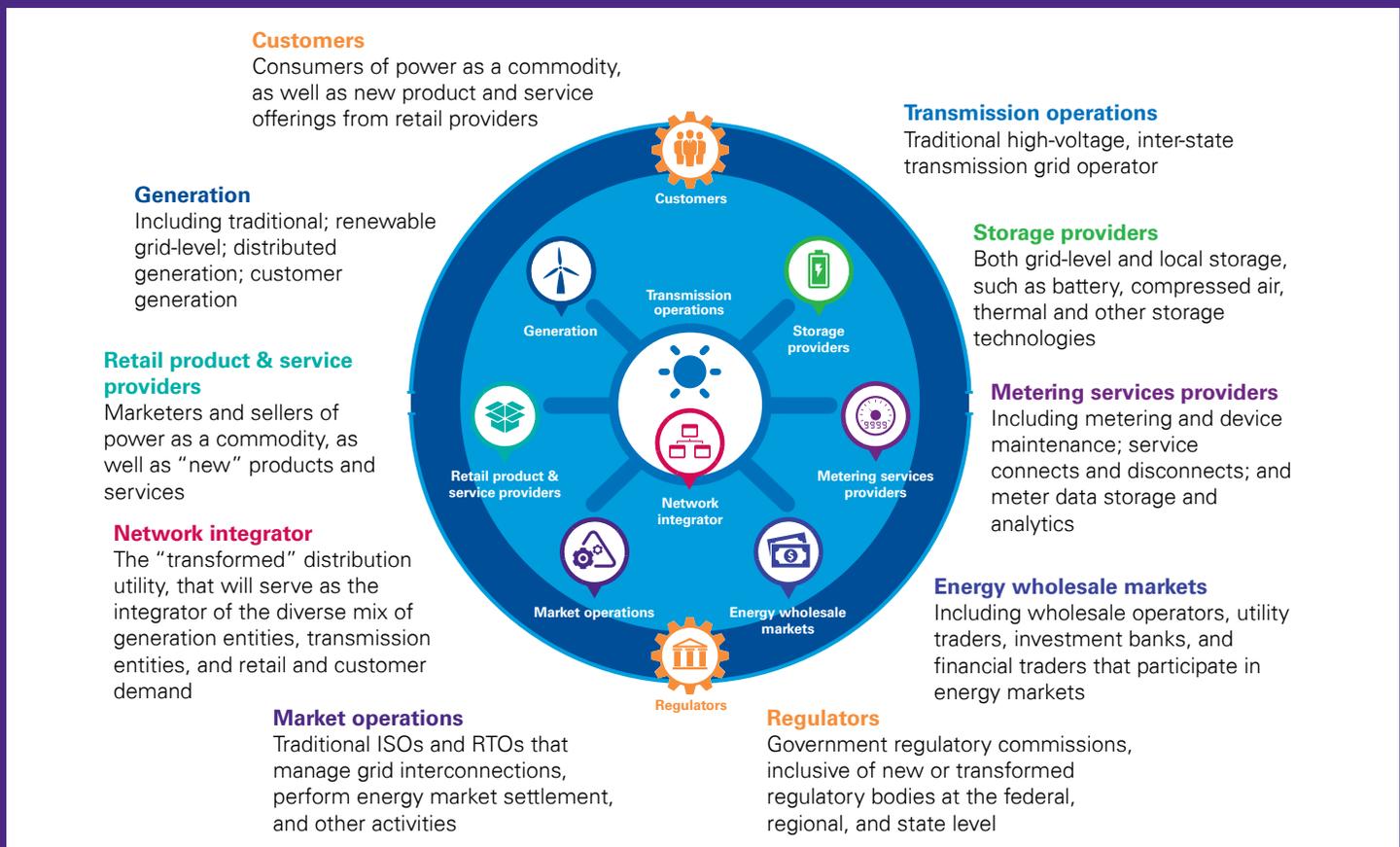
Retail products and services are causing disruption

The electric grid is becoming more digital and distributed. In KPMG's 2015 Energy Business Outlook survey, 70 percent of power and utilities executives indicated that they expect a move away from the traditional, vertically integrated utility model toward a more unbundled and

distributed energy supply market.¹ Companies that market and sell power as a commodity and provide new energy products and services are driving this move. They are challenging utilities' traditional role and forcing them to embrace a competitive market.

The Agile Utility

In *The Agile Utility*, we introduced a future-state industry model that outlined components and participants that would emerge as market participants become more agile



In our subsequent paper, *The Utility as the Network Integrator*, we explored how this model creates opportunities for utilities to step in as market enablers, overseeing the evolution of the electricity sector and plotting a tenable long-term strategy to integrate these components for safe, reliable, and economic power delivery. This paper explores how utilities can develop partnerships and governance over retail product and service providers.

¹ <http://www.kpmg.com/us/en/issuesandinsights/articlespublications/press-releases/pages/rapidly-changing-energy-marketplace-forcing-energy-execs-to-focus-on-business-models-growth-strategies-kpmg-survey.aspx>.

The disruption is coming from familiar and nontraditional areas.

Much of the current disruption has come from outside the industry. It has come either from companies that started in utilities (perhaps on the nonregulated side) or from companies with capabilities more strongly rooted in business-to-business or business-to-consumer interactions. In general, the strengths of these companies lie in developing and deploying new products, and there is an increase in the number of new products being introduced, as well as in the pace of development.

Key areas of disruption include:

1. Nontraditional sources of capital investments.

Technology companies, large retailers, and other stakeholders have partnered to develop distributed, renewable energy options both to reduce power costs and to enhance power reliability.² Grid-scale storage is emerging as another option for reliability and is receiving investment from the military and from companies invested in energy management, like Siemens and Starwood.³ As energy is increasingly viewed as a strategic asset, these investments are likely to continue, and utilities will face what are essentially competitive forces.

2. Rapid technological advancements. The heightened investment in energy technologies has resulted in the faster deployment of new solutions. Renewable energy sources, monitoring and control systems, and energy efficiency devices such as light-emitting diode (LED) lighting are improving at a rapid pace. Improvements in batteries may allow companies like Tesla to deploy products with greater storage capacity.⁴ These rapid changes require utilities to develop standards and governance programs for how the devices connect to the grid.

3. The regulatory landscape. In some states, regulators are taking a cautious approach to expanding the energy ecosystem. In many other states, they are actively involved in working with investor-owned utilities (IOUs) to transform the grid. Consider a few examples:

- a. Clean Power Plan: Aimed at reducing carbon emissions, the state-specific plans require utilities to alter their generating units, mix, or both.
- b. Renewable Portfolio Standards (RPS): The renewable requirements enacted by states have been responsible for 60 percent of the growth in renewable energy generation since 2000.⁵
- c. Nevada: In early 2016, the Nevada Public Utilities Commission (PUC) abruptly ended solar subsidies, resulting in solar companies ceasing business overnight and leaving 17,000 utility customers with stranded solar assets. The PUC subsequently grandfathered existing customers to allow them to realize a return on investment (ROI), but future installations will be under the new rate structure. In many states, the tax credits that encouraged the deployment of renewables are being reevaluated to ensure fair and universal access.
- d. New York: The Reforming the Energy Vision (REV) plan aims to transform utilities into distribution system platform providers, neutral arbiters of a multidirectional distribution grid whose main role is to interconnect distributed energy resources (DERs) and manage reliability.⁶ The plan also focuses on helping utilities develop new businesses with nonutility partners.⁷ This is consistent with utilities becoming Network Integrators and represents a significant shift from the traditional model.

² *The Agile Utility – Future-state industry model*, KPMG Global Energy Industry (2015), page 3, <http://www.kpmg-institutes.com/institutes/global-energy-institute/articles/2015/08/agile-utility-future-state-industry-model.html>.

³ Top Energy Companies Join Forces to Launch Utility-Scale Energy Storage System, *Reviewable Energy World* (October 8, 2015), <http://www.renewableenergyworld.com/articles/2015/10/top-energy-companies-join-forces-to-launch-utility-scale-energy-storage-system.html>.

⁴ David Z. Morris, "Tesla's gigafactory could be obsolete before it even opens. Here's why," *Fortune* (Apr. 27, 2015), <http://fortune.com/2015/04/27/gigafactory-obsolete/>, <http://www.fastcompany.com/3056330/fast-feed/tesla-will-launch-a-new-version-of-its-powerwall-battery-this-summer>.

⁵ Lawrence Berkeley National Laboratory, U.S. Renewables Portfolio Standards – 2016 Annual Status Report (April 2016), <https://emp.lbl.gov/sites/all/files/lbnl-1005057.pdf>.

⁶ Gavin Bade, Chicago's REV: How ComEd is reinventing itself as a smart energy platform, *Utility Dive* (March 31, 2016), <http://www.utilitydive.com/news/chicagos-rev-how-comed-is-reinventing-itself-as-a-smart-energy-platform/416623/>.

⁷ Stephen Lacey, New York's Energy Czar on the Philosophy Behind the State's Energy Transformation, *Greentech Media* (June 12, 2015), <https://www.greentechmedia.com/articles/read/new-yorks-energy-czar-on-the-philosophy-behind-new-york-transformation>.

4. The aging workforce. The aging workforce has been a challenge for years, but technological change now makes it more attractive for younger workers—workers who bring new skill sets that can help drive innovation—to join the industry. International Data Corporation (IDC) predicts that 70 percent of utilities will need to source talent externally to make use of advanced analytics, cognitive systems, cloud, and cybersecurity.⁸ The next generation of workers has grown up with technology, and bringing this talent onboard will help utilities better understand, integrate, and deliver new services.

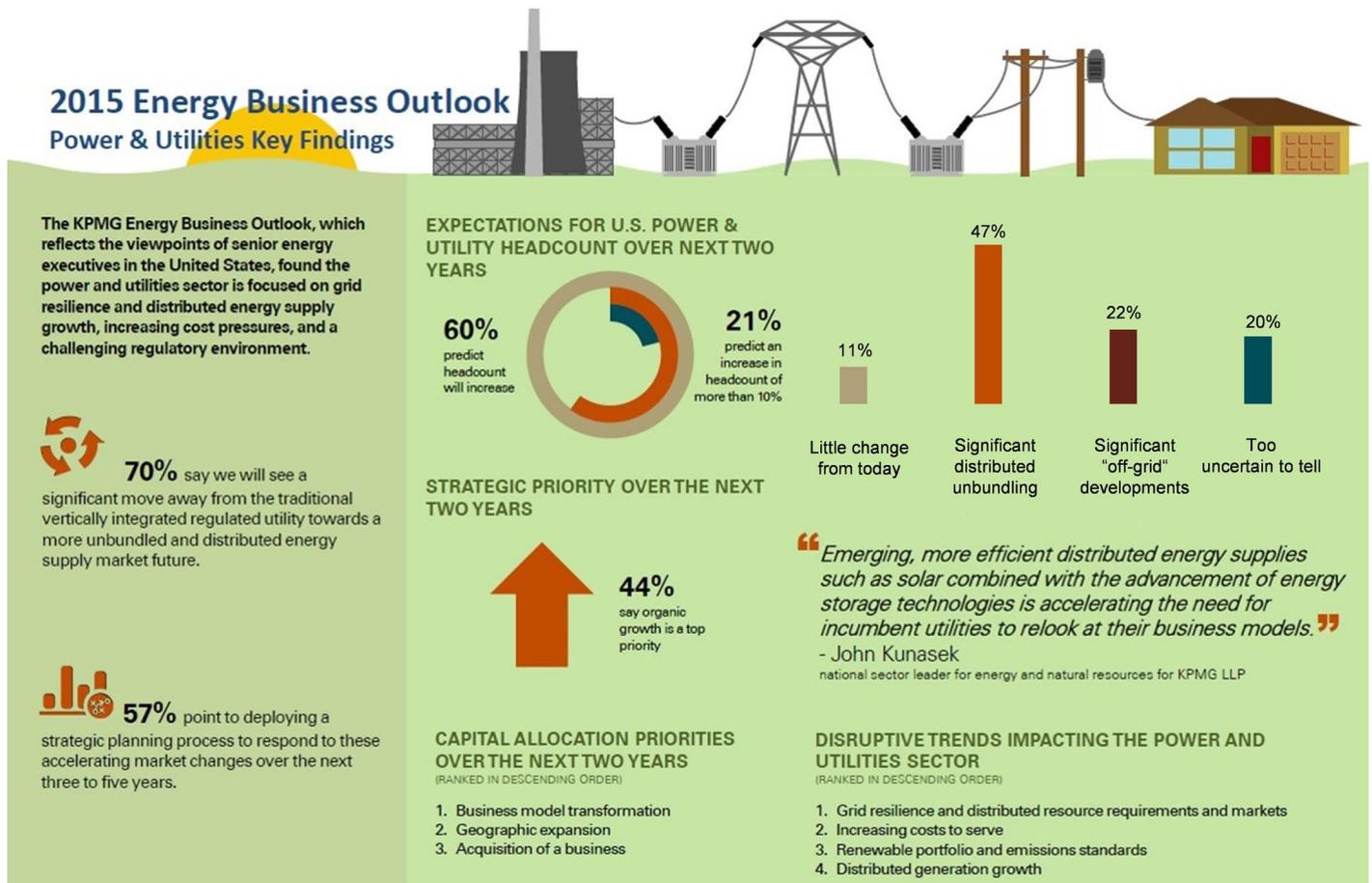
5. Customer demand. Greater customer awareness of energy consumption has increased customer interest in and demand for energy-related products and services. IDC predicts that, by 2018, 20 percent of energy consumers will purchase new energy-related products and services from utilities and their affiliates, particularly electric vehicle charging services, distribution grid services other than commodity delivery, and “prosumer” services.⁹ These services will open up new revenue streams that could help utilities offset the declines in the overall energy consumption over the past several years.

In addition, customers have come to expect intuitive, customizable experiences from all of their service providers, and utilities are poised to deliver them.

Many utilities are already responding.

The shift toward a more unbundled and distributed energy supply market has begun. In our 2015 Energy Business Outlook survey, 57 percent of power and utilities executives identified the need to deploy a strategic planning process to respond to these market changes over the next three to five years.¹⁰

Many utilities have begun acting by deploying smart grid and other grid-monitoring solutions, developing data analytics capabilities to glean actionable insights from the data, and building marketing capabilities to segment customers and enhance customer relationships, solidifying their role as the trusted adviser. They have also begun to build partnerships with solution providers to bring new products to the grid. This includes launching pilot programs of renewables, energy management, storage, and other solutions to test their business cases.



⁸ Roberta Bigliani, Emilie Ditton, Robert Eastman, Jill Febowitz, Gaia Gallotti, Robert Parker, Jean-François Segalotto, IDC FutureScape: Worldwide Utilities 2016 Predictions (November 2015), <https://www.idc.com/research/viewtoc.jsp?containerId=EISC06X>.

⁹ Ibid.

¹⁰ <http://www.kpmg.com/us/en/issuesandinsights/articlespublications/press-releases/pages/rapidly-changing-energy-marketplace-forcing-energy-execs-to-focus-on-business-models-growth-strategies-kpmg-survey.aspx>.

The new products offer utilities integration opportunities.

Many of the new products are coming from outside the utility industry. In many cases, this is due to regulatory constraints on the incumbent utility's role, but traditional product and service companies are being opportunistic in taking advantage of emerging market opportunities.

We see innovation coming in a few key areas:

Products and Services	Sample market participants	Impact on utilities and integration opportunities
Retail electric suppliers <ul style="list-style-type: none"> — Retail electric services — Energy aggregation 	<ul style="list-style-type: none"> — Dynegy — KiWi Power (United Kingdom) 	<ul style="list-style-type: none"> — In deregulated states, these products remove the generation function from the IOU, requiring the utility to facilitate the data transfer and possibly billing. — Energy aggregators secure rate offers on behalf of bundled customer groups. — The integration model is mature in these states, but there is an opportunity to provide integration services for emerging aggregators.
Distributed energy resources <ul style="list-style-type: none"> — Solar panels — Community solar — Turbines and microturbines — Home storage/batteries — Microgrids — Electric vehicles — Distributed generation as a service — Virtual power plants 	<ul style="list-style-type: none"> — Nissan — SolarCity — Tesla 	<ul style="list-style-type: none"> — These sources possibly have the largest impact, as they can be deployed at will, and most utilities are mandated to purchase the surplus. — The integration opportunities revolve around identifying the resources, forecasting the available energy supply, and providing the physical connection into the grid.
Energy efficiency devices <ul style="list-style-type: none"> — Smart thermostats — Smart electrical outlets — Energy-monitoring devices — LED lighting 	<ul style="list-style-type: none"> — Broadband companies — Google — General Electric — Honeywell 	<ul style="list-style-type: none"> — Consumers see utilities as trusted advisers in this area, requiring them to have programs to evaluate, promote, and measure device vendors. — There may be some opportunities to integrate these devices, perhaps through home area networks or home-monitoring services sold by telecommunications firms.

The new products offer utilities integration opportunities. *(continued...)*

Products and Services	Sample market participants	Impact on utilities and integration opportunities
Energy efficiency services <ul style="list-style-type: none"> — Energy management services — Energy audits — Structure envelope testing — Appliance upgrade programs 	<ul style="list-style-type: none"> — Incumbent utilities 	<ul style="list-style-type: none"> — Consumers see utilities as trusted advisers in this area, requiring them to have programs to evaluate, promote, and measure device vendors. — The integration opportunity is to leverage grid data to identify customers who could most benefit from these services and develop targeted marketing programs for them.
Energy data services <ul style="list-style-type: none"> — Consumption data — Usage patterns — Disaggregation — Real-time monitoring dashboards — Analytics as a service 	<ul style="list-style-type: none"> — Bidgely — Opower 	<ul style="list-style-type: none"> — Increased visibility into consumption data can help utilities develop new programs. Data is also provided directly to consumers, so customer service departments must be prepared to respond to inquiries. — The integration opportunity is proactively providing analysis and tailored recommendations to improve results and customer satisfaction.

This analysis highlights the central role that utilities can play as integrators of these emerging technologies. It also illustrates the opportunity that utilities have to become the hub, connecting customers with these new products. For example, utilities as Network Integrators could open a

retail store, either online or brick-and-mortar, where they offer products and can provide buying advice to customers. While utilities have experience with some of these roles, they can adopt leading practices, including how to collaborate with partners, from adjacent industries.



Utilities can look to telecom for guidance

As the utility industry has evolved, people often drew parallels between the utility and telecommunications industries. Not only are those parallels valid, but much of what is happening in utilities today was made possible by the work the carriers did. The modern telecommunications

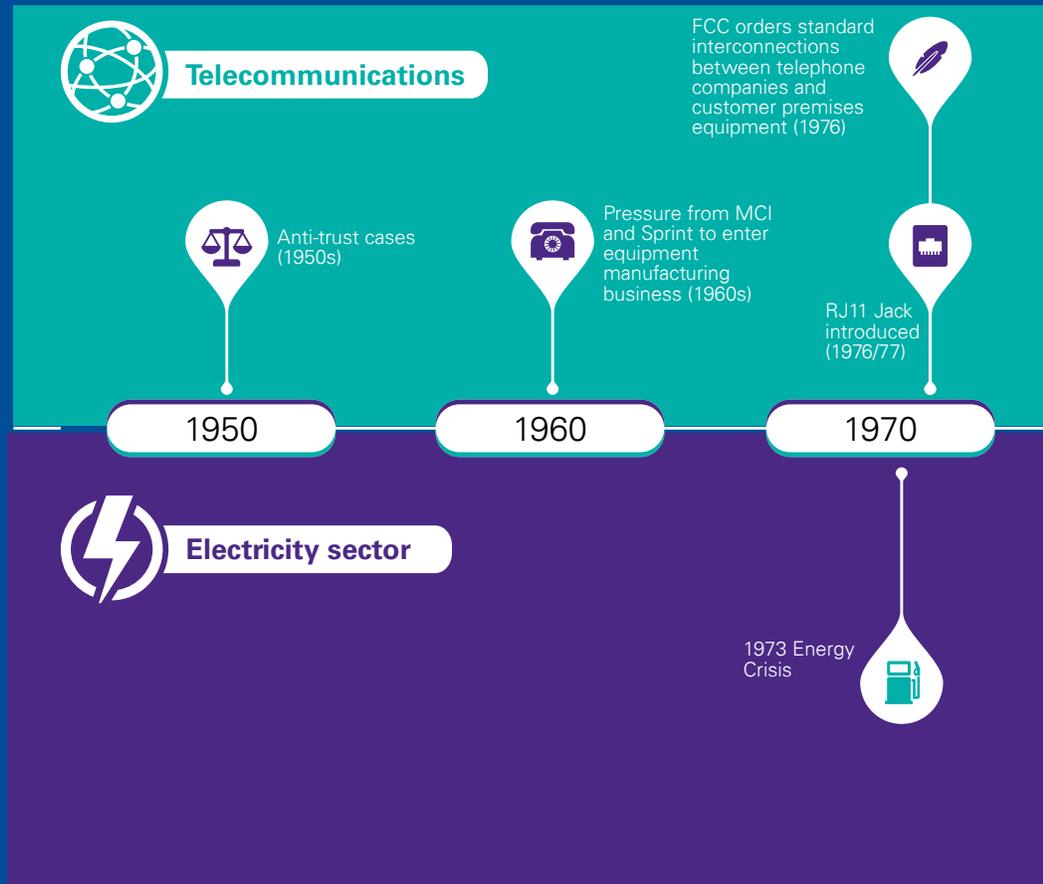
infrastructure is an enabler of automated metering infrastructure (AMI) and other technologies, and the partnership programs they have developed provide a model for utilities to emulate.

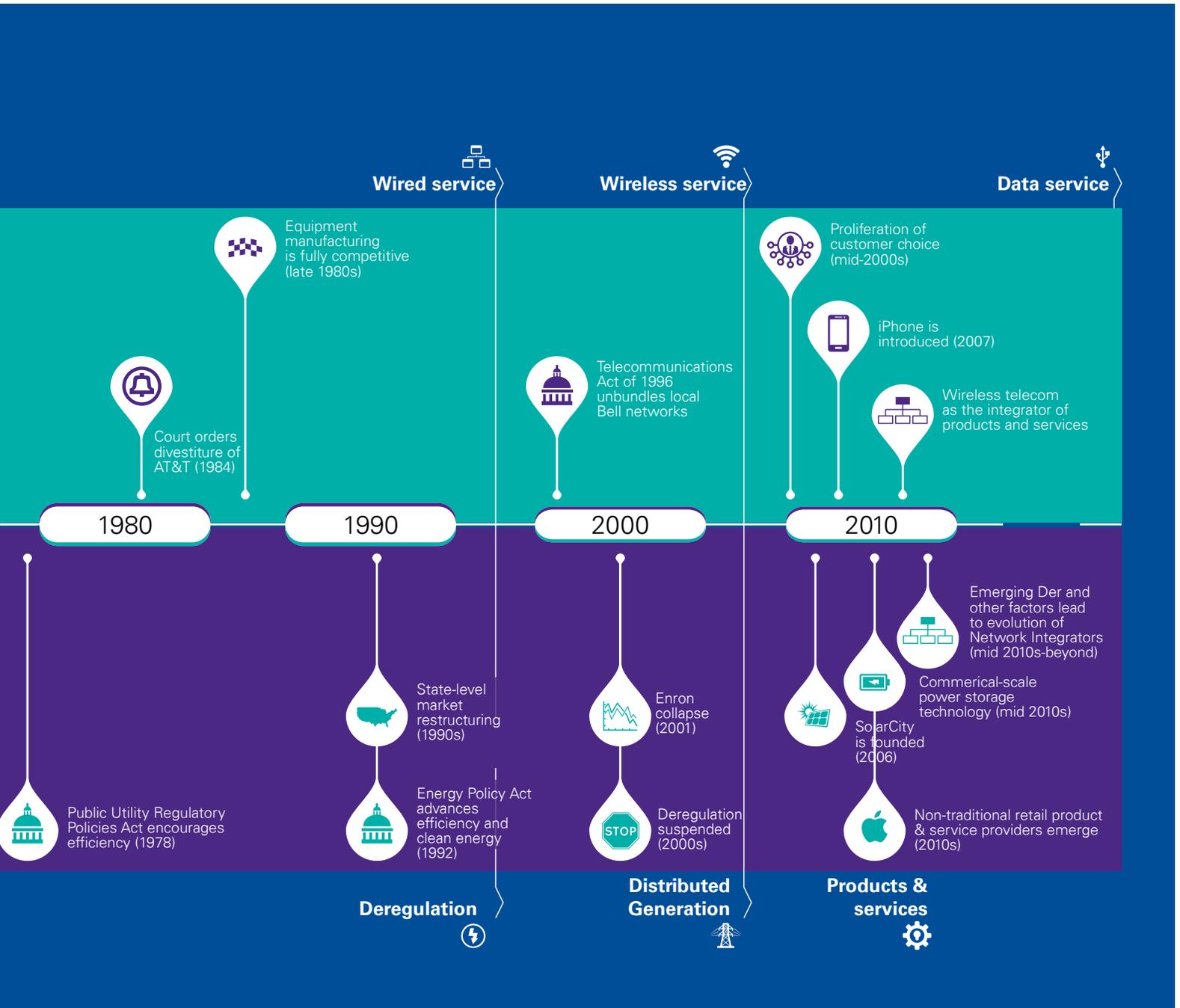
Comparative industry transformations

Telecommunications started as a fully regulated industry, similar to the traditional utility structure, until Divestiture in 1984. In the subsequent years, carriers launched innovation that led to multiple new products and services, including wireless, data, and video entertainment services. While the carriers managed the network expansion, many of the new devices and services were created by companies outside the industry. For example, Nokia, Motorola, and Apple created new handsets; companies like Ericsson, Marconi, and Motorola contributed to the development of cellular networks; and content providers like Amazon and Netflix produce programming that is transmitted along the network. Today, carriers are developing their own platforms, such as Internet of Things and telematics, to create new revenue streams from the installed base.

This diagram compares the progression of the telecommunications and electricity industries. Note that utility deregulation occurred around 10 years after Divestiture, and that difference has allowed the carriers to evolve ahead of the utilities and provide a model for utilities to deploy more products and services.

Industry transformation





Telecoms invested significantly in partner programs.

In 2008, Verizon and AT&T began opening their wireless networks to outside devices. At that time, Apple had released the iPhone® and was marketing it directly to consumers. Additionally, Google had released Android™, joined the Open Handset Alliance, and was looking for ways to sell handsets to consumers. By opening their networks to device manufacturers, the carriers were able to monetize the investment they had made in the network and allow other companies to innovate with new devices. The carriers also developed partner programs, key elements of which are:

1. Device certification – This refers to a process and set of rules to help ensure the device will not compromise the security or reliability of the network.
2. Engineering funding – Where the business case warrants it, the carriers provide funding to complete, certify, and/or produce the device before launch.
3. Joint marketing – Based on the business case, the carriers provide joint marketing support to help drive sales of the device (and the underlying network). Some of these programs are focused on internal sales teams, while others are more visible, e.g., Apple commercials with the carriers' logos, "powered by" taglines, and the use of logos in each partner's marketing materials.
4. Exclusive agreements – Carriers will sometimes enter into exclusive arrangements to market each other's products, such as the iPhone's launch on AT&T. That drives customers to the carrier, and the partner can leverage the marketing spend from the carrier.
5. Billing arrangements – Depending on the business model, the carrier and the manufacturer can offer:
 - Bundled billing – The manufacturer buys capacity on a wholesale basis, bundles it into the cost of the device, sells directly to the customer, and owns the customer billing relationship.

- Carrier billing – The carrier maintains the customer relationship, adding the partner's hardware or service cost to the customer's bill with the carrier.
- Separate billing – The device and plan are sold separately, each party billing the customer for their own products and services.

Using these partner programs, the carriers created new revenue streams while maintaining security, reliability, and a customer relationship by structuring how third parties connect to the network and investing in innovative solutions.

Telecom stores provide a deeper customer experience.

Telecom retail stores carry an array of products made by other companies, such as cellular phones, tablets, home security systems, wearable devices, and location trackers. These products are designed to provide lifestyle benefits, and the majority of the devices require wired or wireless service from a provider. The most important aspects of the store, however, are the employees, who are trained to understand these products and help the customer select devices that meet their needs.

Consumers will make choices related to lifestyle faster than they will make choices about cellular service or energy providers. Over the past few years, Verizon Wireless has opened a series of "destination stores" with zones related to specific interests, such as fitness, connected home, and entertainment.¹¹ These stores allow customers to experience the technology—and their wireless service—in new ways, driving business for the carrier and the partner. These stores, along with other retailers like Best Buy, sell products to manage energy use. Utilities could offer a similar experience.

¹¹ Al Sacco, Verizon's Boston 'Destination Store' goes way beyond wireless, CIO (April 7, 2015), <http://www.cio.com/article/2907055/wireless-carriers/verizons-boston-destination-store-goes-way-beyond-wireless.html>.

Utilities' partner programs share key characteristics.

The idea of partnering with third-party vendors is not new. Under deregulation, many IOUs implemented programs for interacting with alternate suppliers, and for many years, utilities have deployed partner solutions for demand response, renewable energy, and energy management. In California, the PUC mandated that IOUs enable a retail market for home area networking (HAN) using smart meters,¹² and several worked with HAN vendors to establish a common protocol, processes for certifying HAN devices, and even new offerings. As a result, smart meters made a customer's usage data available to be viewed and analyzed by commercial devices provided by new entrants.

When it comes to renewables, a Utility Dive survey of utility executives showed that 60 percent believe utilities should partner with third parties to deploy distributed energy resources.¹³ As these new technologies have come to market, many utilities have expanded their partner programs. Some examples include:

1. Duke Energy created a coalition of 25 utilities, vendors, research laboratories, and government agencies to lead the development and commercialization of a framework to provide interoperability of retail products.¹⁴ This partnership has allowed Duke to explore and pilot new

solutions that benefit Duke and the broader industry, and the partners' diversity of skill sets and experiences has generated significant insights and value.

2. Exelon has formed dedicated innovation teams such as the Emerging Technology team, which goes beyond traditional corporate boundaries to identify and pilot new technologies with partners. They also host a recurring innovation expo that brings employees together with experts from different fields to explore creative solutions to complicated business problems, share ideas, and learn what their colleagues are doing.¹⁵ These programs allow Exelon to identify new products that they can bring to their customers.
3. Southern California Edison's partnership program has two key elements. One program provides support to local governments to identify and address energy efficiency opportunities in municipal facilities and the community. A second program helps large institutions achieve aggressive demand-side management goals.¹⁶ Through this approach, Southern California Edison is positioning itself as a trusted adviser to its customers and communities.

Partner programs can be advantageous for utilities, customers, and third parties, as they allow utilities to monetize the grid, including the wires and meters.

¹² California Public Utilities Commission Resolution E-4527

¹³ Herman K. Trabish, "Learning by doing: How utilities are answering the distributed energy resources challenge," *UtilityDIVE* (March 9, 2015), www.utilitydive.com/news/learning-by-doing-how-utilities-are-answering-the-distributed-energy-resou/415089/.

¹⁴ Duke Energy, Designing ways to operate the grid more simply & cost-effectively, <http://www.duke-energy.com/about-us/coalition.asp>.

¹⁵ <http://www.exeloncorp.com/newsroom/Pages/exelons-culture-of-innovation.aspx>

¹⁶ Southern California Edison, Partnerships, <http://www.sce.com/wps/portal/home/partners/partnerships/>.

The center of the customer experience is the sweet spot

Even as new providers have added connections to the grid, the utility remains at the center, coordinating the power and energy flows. This is the sweet spot. Utilities can leverage this position and the data available from these transactions to better understand customer behavior, usage patterns, and the opportunity to position new products and services.

Utilities are already the center of the customer experience.

Most utilities want to maintain their customer relationships and are already making investments in analytics and marketing to better serve customers. A recent study revealed that utilities are attempting to increase their engagement with customers related to each type of transaction.¹⁷ IDC predicts that, by 2017, 45 percent of utilities will invest in a new customer experience solution and 20 percent will invest in a new billing system to help ensure customers view them as trusted providers.¹⁸ Additionally, the president of Southern California Edison indicated that, while distributed energy resources are redefining the utility's role, "[w]e have to recognize that it's a mind-shift change from [having all] the control but still recognize we should be at the center."¹⁹

Analytics and billing systems are a good start in remaining at the center of the customer experience. Utilities will also need to continue investing in strong programs to market emerging products that connect key customer segments with the products and services that add value to each.

Customers want their utility to be their adviser.

Customer trust in utilities is high, and customers prefer to receive services from a utility rather than from other service providers (e.g., cable and Internet). While almost half of the respondents are interested in using solar, more than half would be more interested if their local utility was the provider.²⁰ This is great news for the utilities, because they have permission to introduce their customers to new products and services.

However, almost a quarter of the respondents in that study indicated a high likelihood that they would choose an electric provider other than their current utility if given the

choice. This group represents an opportunity for utilities to invest in programs to improve those relationships. Maintaining a focus on the lifestyle benefits of new products and services could help win these customers.

Regulators are developing unique incentives.

“As utilities become Network Integrators, they will become a hub through which products and services are offered to customers. Retail product and service providers will continue to sell direct to customers, but the utility will have a central role in marketing, selling, and supporting partner solutions. This will help utilities meet customer demand, retain revenues, and achieve regulatory requirements.”

– Todd Durocher, PMP, Principal, Advisory, KPMG



Regulatory policies such as renewable portfolio standards and other incentives have been significant, if not primary, drivers for the development and adoption of new retail products. These have many positive effects, such as creating jobs and reducing reliance on fossil fuels. However, in many jurisdictions, rate structures have not evolved to match these new products. For example, time-of-use rates that charge higher prices in the early afternoon may not be as effective when solar panels are producing peak capacity at that time. Each jurisdiction needs to assess the shifting load and supply curves and then design rate structures and incentives to reduce peak demand and improve efficiency.

As an example of forward-thinking regulatory action, the United Kingdom's Office of Gas and Electricity Markets (ofgem) has established the Revenue = Incentives + Innovation + Outputs (RIIO) framework. RIIO is a performance-based model for setting utility costs²¹ that is designed to support innovation and meet environmental objectives while continuing to provide safe and reliable service. It provides a model for other jurisdictions to facilitate the development and integration of new services.

¹⁷ "Customer Engagement," Utility Dive report: The State of the Electric Utility 2016, <http://www.utilitydive.com/library/state-of-the-electric-utility-2016/>.

¹⁸ Roberta Bigliani, Emilie Ditton, Robert Eastman, Jill Feblowitz, Gaia Gallotti, Robert Parker, Jean-François Segalotto, *IDC FutureScape: Worldwide Utilities 2016 Predictions* (Nov 2015), <https://www.idc.com/research/viewtoc.jsp?containerId=EISC06X>.

¹⁹ Krysti Shallenberger, "Will utilities become UBER for DERs," *UtilityDIVE* (March 30, 2016), <http://www.utilitydive.com/news/will-utilities-become-uber-for-der/416428/>.

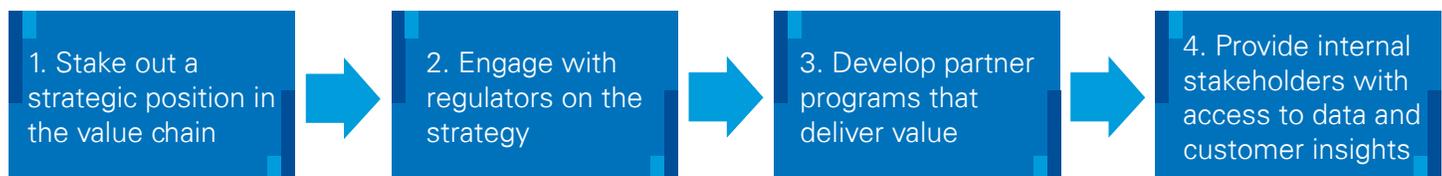
²⁰ 2015 State of the Customer in the Utility Sector, Distributed Energy Financial Group, <http://defgllc.com/publication/my-utility-my-dog-who-controls-the-leash/>.

²¹ ofgem, *Network regulation – the RIIO model*, <https://www.ofgem.gov.uk/network-regulation-riio-model>.

Following a road map can lead to successful partnerships

Network Integrators act as market enablers, providing long-term strategies to integrate new products and services into the grid. The transformation is pervasive within the business and will take time to be fully effective, even for utilities that have already trialed or deployed some of these services.

In the face of disruption, utilities must think and act strategically to maintain their trusted-adviser position. This requires determining a desired position in the ecosystem and aligning key stakeholders to help ensure execution is a success.



1. Stake out a strategic position in the value chain.

Each utility must seek a strategic position that accounts for the customer relationship and for the new retail products and services. We believe that entities that manage customer connections to the grid, manage power and information flows, and act as the data hub provider should find themselves at the center of the experience. As new products and services are deployed, each utility needs to reassess its positions within the value chain to help ensure it has the right mix for its business strategy and regulatory environment.

Some key components to strategy development include:

- Assessing new entrants to determine the short-term and long-term impacts to the utility's business models and rates
- Conducting scenario planning exercises, focusing on the known and the unknown, to help validate the strategy

- Developing capabilities to perform customer segmentation, identify changing customer demands, and align products and services with key segments
- Promoting innovation by incorporating leading practices within and outside the industry
- Structuring the business to monitor retail marketplace activity and to respond to the disruptive force of retail entrants
- Attracting and retaining innovators and leaders from outside the industry (e.g., product-focused professionals who can bring insights into the product development life cycle)
- Enhancing risk management practices.

2. Engage with regulators on the strategy.

Public utility commissions and other overseers are keen to ensure that utilities maintain high reliability, safety, and customer satisfaction while meeting energy efficiency standards and exhibiting strong financial stewardship. Many of these new products and services can help fulfill those goals, but they may require changes to policies or rate structures to maximize the benefits.

Two-way strategic alignment with regulators is crucial for obtaining regulatory approvals of new products and services. Collaboration, progressive thinking, and comfort with the utility's program managers will further support that alignment. Utility leaders should seek creative ways to engage with regulators, including inviting them to innovation centers or pilot sites to illustrate the benefits of the new products under consideration.

Activities that can help improve regulatory alignment include:

- Continually improving dialogue and partnership with regulators, particularly on emerging technologies
- Monitoring activity in other jurisdictions to understand the innovations being introduced, the impacts on customers and rates, and the associated regulatory changes, which will help when developing a case for changes the utility wants to introduce
- Working to anticipate what the regulators are considering and developing programs to address those needs.

3. Develop partner programs that deliver value.

Network Integrators must select and integrate partners that expand the product and service mix while continuing to provide reliable power. Where permitted by regulation or customer opt-ins, a utility can fulfill this role by acting as the channel through which the products are positioned with the target customers. Incorporating practices from the telecommunications models will increase the chances of the program's success. Demonstrating to the regulators that the utility is acting in the consumers' interest helps align the regulators with the utility in these programs.

Some key considerations in the partnership program include:

- **People.** Ensure that the partner team has experience managing partner relationships, business models, and contracts. Align these with key metrics. Provide training on the partner and customer experience.

- **Process.** Ensure that the sourcing processes are in place to evaluate, certify, onboard, and transact with new vendors. Establish processes to deploy and install new technologies. Update sales, support, and billing processes to reflect these new solutions.
- **Organization.** Establish an enterprise-wide approach to partnerships. If each operating company has its own, develop processes to share lessons learned.
- **Technical.** Develop and publish a set of interconnection standards. Ensure that new entrants can connect to the grid without causing disruption and that appropriate security measures are in place.
- **Customer.** Develop analytics engines and segmentation models to identify customer needs. Design an appropriate customer experience. Ensure that customer feedback mechanisms are in place.
- **Financial.** Validate that the new models are advantageous to the customers, rate payers, and shareholders. Develop the business case and ROI tools to evaluate new business opportunities consistently. Regularly measure and monitor results.

4. Provide internal stakeholders with access to data and customer insights.

As new partners and devices come online, multiple groups around the utility will want access to the data to evaluate for their functions. For example:

- **Rates and regulatory affairs** will want data to monitor compliance and to help frame discussions on new regulations.
- **Finance** will want data to evaluate the progress against business cases and to develop rate cases.
- **Customer service** will want to evaluate consumption patterns, product usage, and customer satisfaction.
- **Power delivery** will want to view data on voltage levels, outages, and line losses to identify areas of the grid that may require repairs.
- **IT** will want to ensure proper access to systems and management of data sets on the network.

A comprehensive data governance model will be required to help ensure that only authorized parties have access (including across nonregulated entities) and that a single version of the truth is maintained across the company.



KPMG can assist utilities become Network Integrators

KPMG can assist power and utility companies as they assess their role in the changing industry marketplace and the challenges and opportunities these disruptive forces present.

1. Stake out a strategic position in the ecosystem.

KPMG can help you develop your strategic position in light of new retail product and service providers. We can help identify capabilities and partnerships that support the strategy and analyze potential partnerships for fit and impact on the business. Where it makes sense, our Deal Advisory teams can help you evaluate potential investments and transactions to expand your scope of services.

As part of our firm's commitment to innovation, we have developed solutions and capabilities that can help guide utilities in developing a culture of innovation. Our customer teams can help you develop capabilities to perform customer segmentation, identify changing customer demands, and align products and services with key segments. Our People and Change teams can also help you evaluate your workforce and attract and retain innovators and leaders from outside the industry.

2. Engage with regulators on the strategy.

KPMG has provided regulatory support services to many utilities, including supporting rate cases and providing expert testimony. We can work with your regulatory teams to

identify local priorities, develop business cases, and provide guidance on seeking regulatory approval for new initiatives. We can also tap into our network of member firms to provide insight into regulatory activity in other jurisdictions, helping to uncover new sources of value and bolster your case for change.

3. Develop partner programs that deliver value.

KPMG has specialists that can help you structure your partner programs and offer strategic sourcing guidance. Our teams can also help design or assess your organization, including people, processes, technology, and financial metrics.

4. Provide internal stakeholders with access to data and customer insights.

KPMG can help you set up governance models to help ensure that internal stakeholders have access to data made available from the new partnerships and devices. Our functional specialists can also help advise your teams on how to fully leverage this data to uncover insights and add value to the business. Our security specialists can also help ensure that only authorized personnel have access to the data.

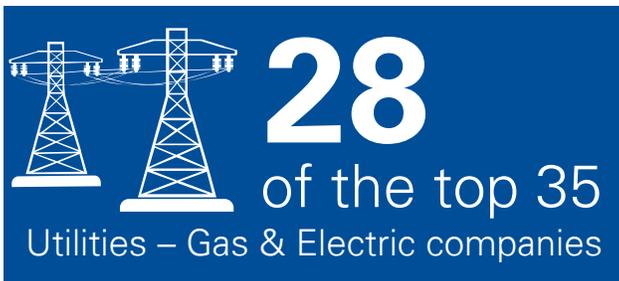
How KPMG can help

Our Power & Utilities practice

KPMG's experience with clients in the utility industry—including retail, generation, transmission, and distribution—is significant in North America. We assist organizations as they grapple with the changing regulatory and competitive environment and complex risk, performance, technology, and compliance issues and evolve their customer experience to meet changing expectations and support broader growth strategies.

KPMG's Power & Utilities practice provides executives with creative, proactive, and timely advice, taking into account critical business considerations. Our people are immersed full-time in the industry, enabling us to anticipate change and provide forward-looking insights on emerging industry issues.

KPMG provides services to



KPMG Global Energy Institute (GEI)

In today's marketplace, organizations look for knowledge that can help them make sense of a changing environment, help them remain ahead of the curve, and help them keep their businesses moving in the right direction. We are committed to sharing our perspectives on industry issues

and do so through a number of channels. the GEI interacts with its over 30,000 members through multiple media channels, including audio and video Webcasts, publications and white papers, podcasts, events, and quarterly newsletters.

About the authors



Todd Durocher, PMP
Principal, Advisory

Todd Durocher is a principal in KPMG Power & Utilities Management Consulting practice with more than 16 years of consulting, business transformation, strategy, planning, and program management experience. Todd assists his domestic and international clients with business and technology transformations related to acquisitions and consolidations, disruptive technologies, market deregulation, smart grid implementations, cost optimization, and performance improvement. Todd leads KPMG's P&U Global Insights team to evaluate disruptive technologies and their impacts on traditional and nontraditional utilities including scenario planning and agile utility models.



Kyle McNamara
Director, Advisory

Kyle is a director in KPMG's Power & Utilities Management Consulting practice with more than 17 years of management consulting and business operations. He has deep experience in grid modernization, utility business models, emerging technologies, solution development, and business process improvement. Kyle has substantial experience at the forefront of grid modernization, advising utilities and solution providers on strategies to drive value from emerging technologies.



Kelly Stephenson
Director, Advisory

Kelly Stephenson is a director in KPMG's Management Consulting practice with over 13 years of business advisory and industry experience. Kelly works with companies in the Power and Utilities sector in a strategy-to-execution role, supporting his clients' key initiatives related to business and technology transformation, postmerger integration, program management, and performance improvement. Kelly leads KPMG engagement teams that deliver services to Power and Utilities clients' key business line functions (such as meter-to-cash, retail operations, market settlement, customer experience, and gas operations) as well as back-office functions (including IT, HR, internal audit, and supply chain).



Contact Us

Todd Durocher

Principal, Advisory

T: 617-988-1278

E: tdurocher@kpmg.com

Kyle McNamara

Director, Advisory

T: 612-741-4885

E: kylemcnamara@kpmg.com

Kelly Stephenson

Director, Advisory

T: 901-229-0255

E: kstephenson@kpmg.com

The KPMG Global Energy Institute (GEI)

Launched in 2007, the GEI is a worldwide knowledge-sharing forum on current and emerging industry issues. This vehicle for accessing thought leadership, events, Webcasts, and podcasts about key industry topics and trends provides a way for you to share your perspectives on the challenges and opportunities facing the energy industry—arming you with new tools to better navigate the changes in this dynamics area.

kpmg.com/socialmedia



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