

2015

STATE OF THE ELECTRIC UTILITY

SURVEY RESULTS

*HERE'S WHAT THE UTILITY OF THE FUTURE LOOKS LIKE,
ACCORDING TO OVER 400 U.S. ELECTRIC UTILITY EXECUTIVES.*

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DEMOGRAPHICS

Every electric utility and its service territory is different, so we asked those surveyed to provide information about the type of utility they work for and the region in which they operate.

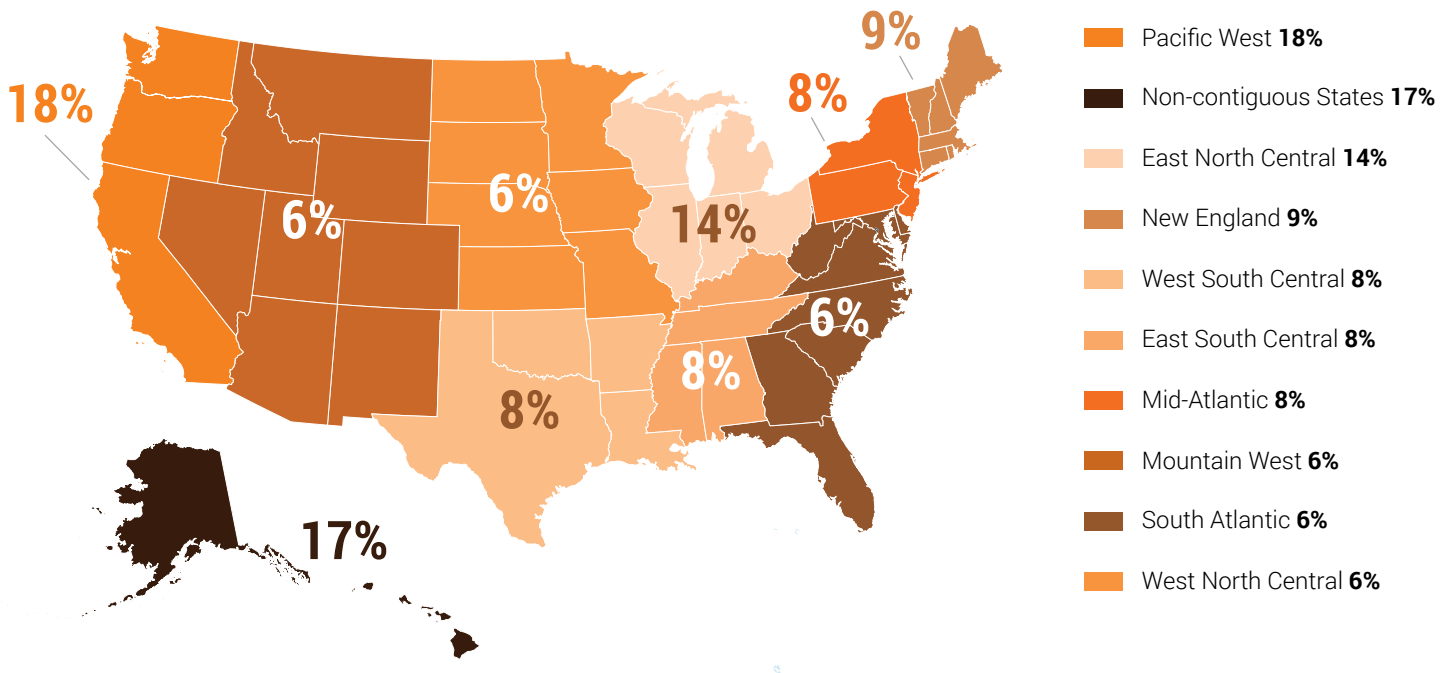
Please note:

A disproportionate percentage of survey respondents said they hail from Alaska or Hawaii. Somewhat surprisingly, their results were not materially different from the mainland.

What type of utility do you work for?

Investor-Owned Utility	57%
Municipal Utility	18%
Public Power Agency	13%
Electric Cooperative	12%

Where is your utility's service territory located?



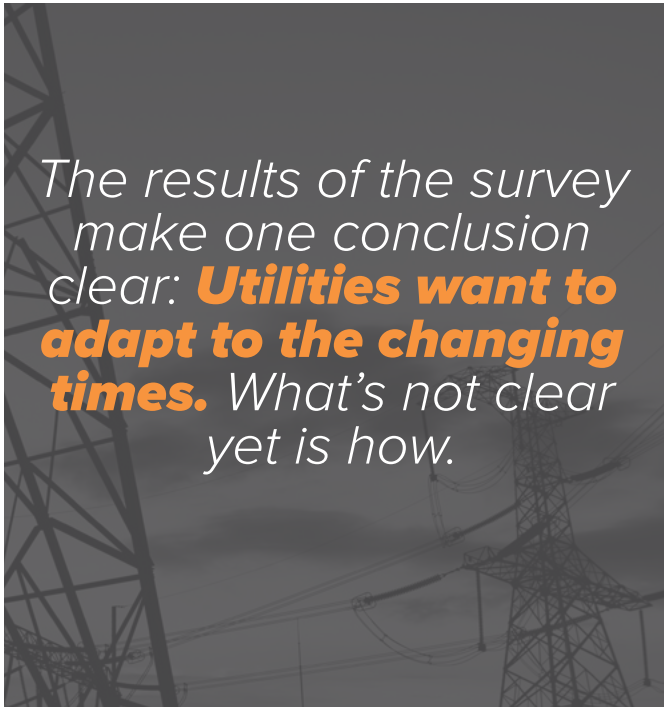
EXECUTIVE SUMMARY

In 2015, the U.S. electric utility is in a state of transition.

Traditional cost-of-service utility regulation was set up in the early 20th century to provide America with universal access to electricity. But the traditional way of doing business may no longer work in 2015 and beyond.

Emerging technologies, shifting customer expectations, and new energy economics are causing the industry to rethink the business and regulatory models that have served them for over 100 years.

To better understand how utilities view their present and future, Utility Dive surveyed 433 U.S. electric utility executives on the state of the electric utility going into 2015. The result is our second annual “State of the Electric Utility” report, sponsored by Siemens.



The results of the survey make one conclusion clear: **Utilities want to adapt to the changing times.** What's not clear yet is how.

KEY FINDINGS

- *Utilities will move away from the traditional vertically integrated utility model towards a more distributed, service-based model.*
- *The industry's three biggest growth opportunities are distributed energy resources, the customer relationship, and transmission.*
- *The industry's three most pressing challenges are old infrastructure, the aging workforce, and the current regulatory model.*
- *The vast majority of utilities are seeing minimal, stagnant or even negative load growth in their service territories. The industry is undecided on how to best address the issue of depressed electricity sales growth.*
- *Utilities plan to use more natural gas, solar, wind, distributed energy resources, and energy efficiency over the next 20 years. Meanwhile, the industry expects to use significantly less coal and oil.*
- *Utilities see a big opportunity in distributed energy resources, but are unsure of the best business models.*

The results of the survey make one conclusion clear: Utilities want to adapt to the changing times. What's not clear yet is how.

STATE OF THE ELECTRIC UTILITY

A survey of over 400 U.S. electric utility executives reveals an industry that wants to overcome old challenges and seize new opportunities.

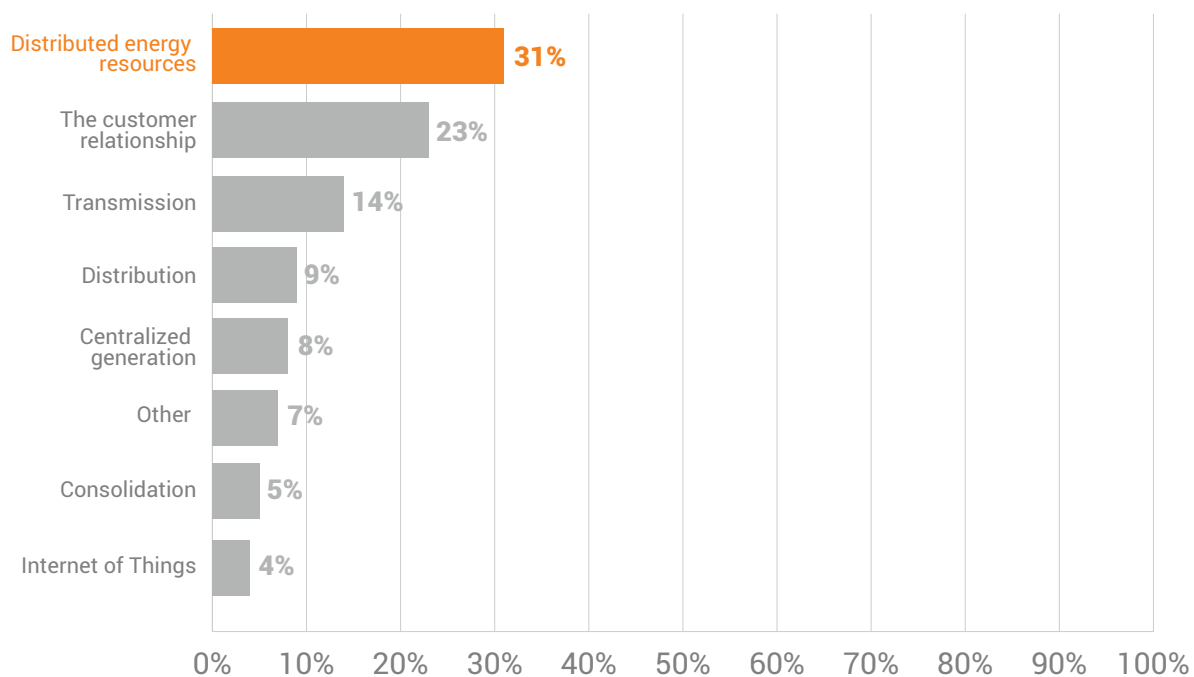
Utility executives are confident in the industry's growth, but they also expect to see new models and approaches.

Long seen as a threat, distributed energy resources may well become the biggest driver of industry growth, according to the executives we surveyed. While we hear frequent grumblings about the so-called "death spiral," utilities view distributed energy as a massive opportunity.

With the rapid proliferation of distributed energy resources comes the need for utilities to better understand and engage with their customers. For the first time, new competitors such as rooftop solar companies are threatening to disintermediate ratepayers from the utility. It's not surprising that utilities view the customer relationship as another big opportunity.

The opposite of distributed energy — centralized generation — seems to offer little promise of future revenue to utilities. Once a profit center, central station power is viewed by only 8% of utilities as their biggest

What does your utility see as its biggest growth opportunity over the next five years?



growth opportunity. Those utilities least interested in centralized generation tend to do business in the deregulated regions of the country where regulated utilities cannot own power plants.

If utilities abandon traditional utility profit centers of the past, regulators must enable them to adopt new business models.

One traditional profit center remains a constant for utilities: transmission. Stringing wire is a utility expertise and comes with a federal guaranteed rate of return. Demand for transmission has heightened in recent years for several reasons: the need to improve reliability, replace old lines, connect wind and solar farms to the grid, accommodate fluctuations in population, and access less expensive energy resources.

Many utilities are contemplating how they can fold these varied opportunities into a coordinated business strategy. National Grid's Connect21 strategy is one such example: It proposes that utilities build a resilient

grid backbone to help meet policy goals for renewables and distributed energy resources. Utilities then get paid for achieving the goals, many related to saving energy and incorporating cleaner resources.

Moving from one profit center to another is not easy for utilities since they must justify investments to regulators. If utilities leave the centralized generation business behind to provide customers with services like distributed solar and energy efficiency, regulators must enable them to adopt new business models.

That's beginning to happen in certain areas of the country, which may be part of why many utilities now see distributed energy as a significant growth opportunity. New York regulators are contemplating radical changes through the Reforming the Energy Vision (REV) proceeding, which would create a marketplace for the buying and selling of distributed energy.

Q. What best describes your feelings about the future growth of the U.S. electric utility industry?

30% NOT CONFIDENT

70% CONFIDENT



CHALLENGES

Utilities face myriad challenges in 2015. The most pressing challenge for utilities is aging infrastructure.

Today's grid may not be up to the task of reliably integrating high levels of renewables, distributed energy resources, and smart grid technologies. The American Society of Civil Engineers gave U.S. energy infrastructure a barely passing grade of D+ in 2013. Utility-scale renewables, most of all, demand sophisticated grid management to accommodate for their variability in production.

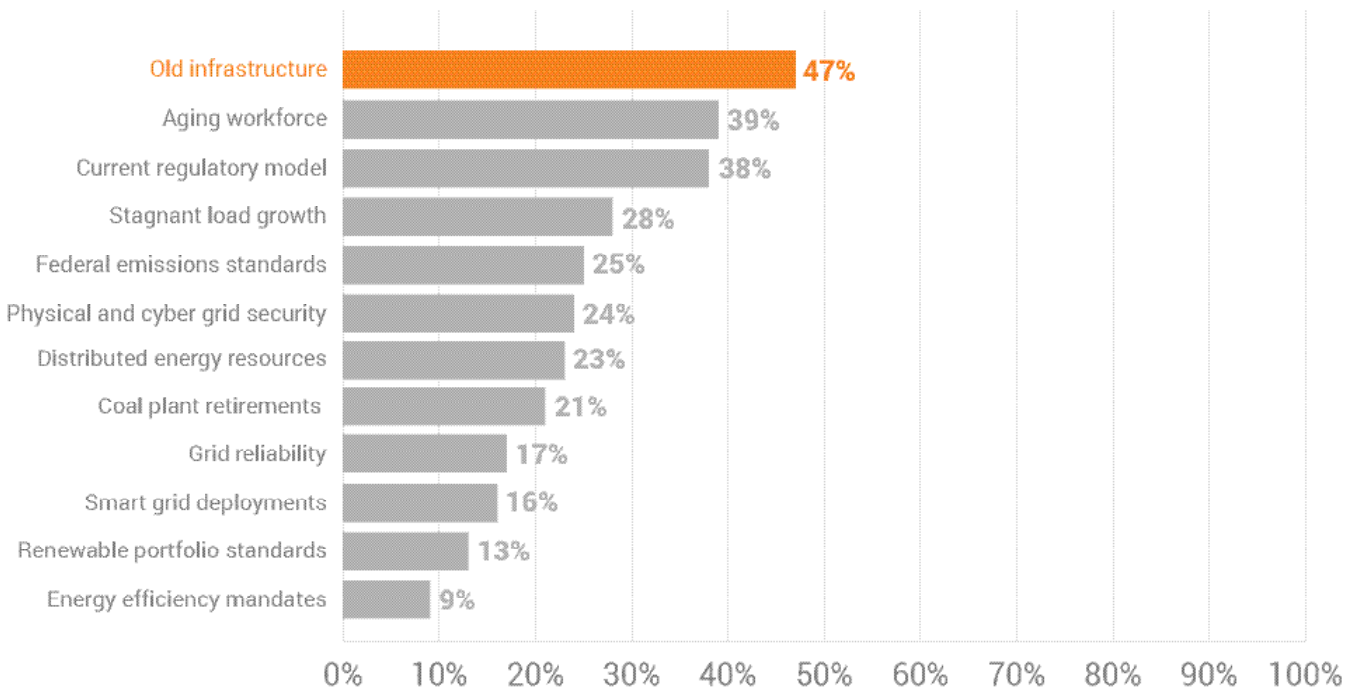
But it is not just the aging of infrastructure that worries utilities. The aging of the utility workforce is their second most pressing concern, according to the survey results. The numbers — those entering the industry and those retiring — aren't balancing out. Workers do not gain the ability to make correct blink-of-an-eye operating decisions without years of experience.

The third most pressing worry for utilities is another problem of age. The industry's regulatory models are out of date, according to utility executives. State policies and regulations were designed for a system where utility revenue stems from electricity sales, not energy savings. Utilities think it's time to shed some of these old rules.

The U.S. electric utility industry cannot seize its greatest opportunities without solving its biggest problems.

Distributed energy cannot be a profit center without the modernized grid infrastructure that's needed for grid integration. Energy efficiency cannot be a utility business model without a new regulatory model.

Q. What are the three most pressing challenges for your utility?



EMERGING TECHNOLOGIES

As new technologies transform the utility business, where should utilities invest their capital?

The utility executives we asked were clear about one thing: Put money on energy storage.

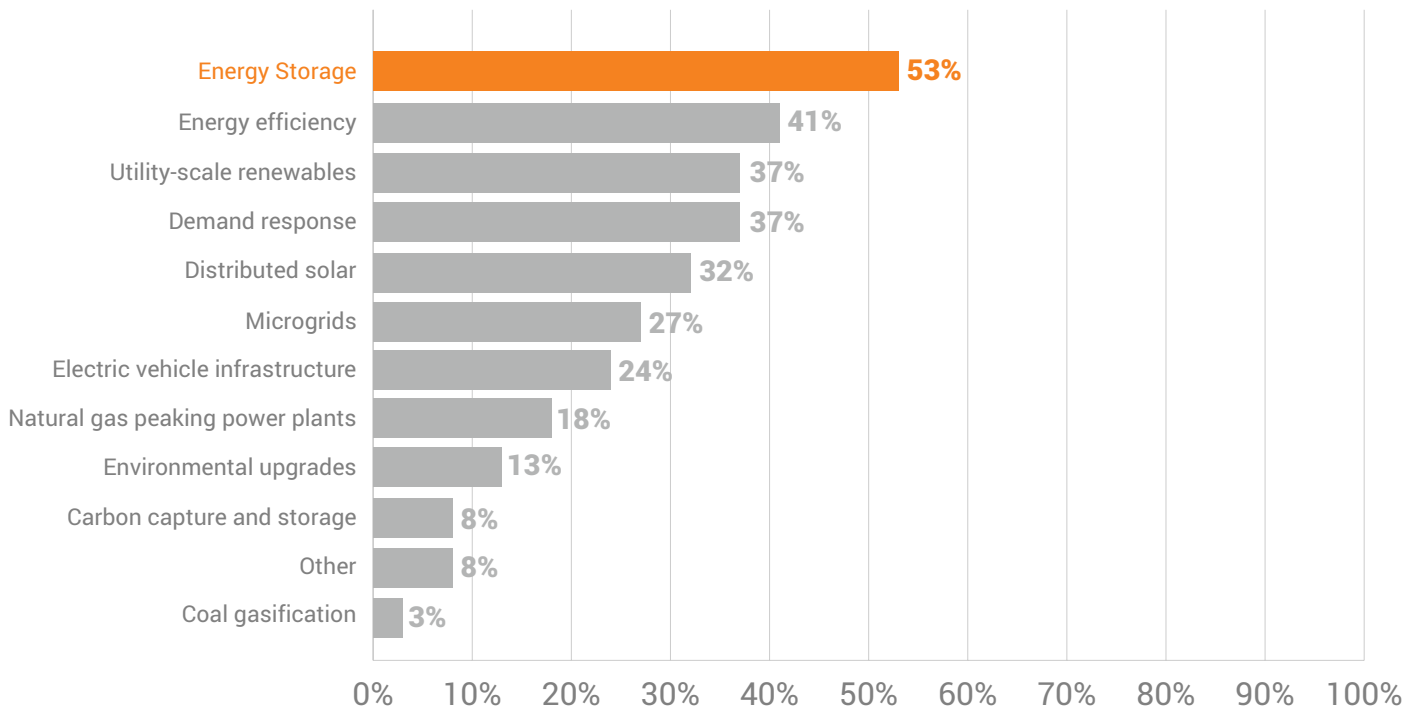
Recent activity in the storage sector backs this up. Utilities showed interest in storage technology at the gigawatt-scale for the first time in 2014. California's ambitious mandate requiring the state's big three investor-owned utilities to procure 1,325 megawatts of storage by 2020 essentially jump-started the utility-scale storage market. Southern California Edison, for example, selected a whopping 261 megawatts of storage through a competitive solicitation late in 2014

when it was only required to procure 50 megawatts. Meanwhile, a Texas utility is thinking even bigger — Oncor has floated the idea of adding 5,000 megawatts of storage to the grid in the coming years.

The sudden interest in storage stems from the technology's renewed value proposition. Battery prices are dropping fast and are likely to fall further as massive manufacturing facilities, such as Tesla's wildly ambitious Gigafactory, drive prices down through economies of scale.

The utility executives we asked were clear about one thing: bet on energy storage.

Q. What are the top three emerging technologies that you think your utility should invest more in?



Utility executives were nearly as enthusiastic about clean energy. After energy storage, utilities identified energy efficiency, utility-scale renewables and demand response as technologies they should invest more in.

*Utilities see opportunity in new technologies, **but there is no proven model yet for investment and cost recovery.***

Natural gas peaking power plants took a back seat on the utility industry's priority list. Given the abundance and low price of natural gas, this is somewhat surprising. Perhaps this is because the industry is already investing in natural gas and utilities are concerned about an overreliance on the fuel, which had disastrous consequences for the industry during the polar vortex in 2014.

Coal gasification, carbon capture and storage, and environmental upgrades are not seen as promising investments. Very few utility executives think their utilities should invest more in those technologies. Little hope exists for carbon capture and storage in the near term, while "clean coal" demonstration projects have proven hard to finance, except in narrow applications where the carbon has an industrial use, such as enhanced oil recovery.

The results reveal that utilities are betting against old technologies and see opportunity in innovation. That's the first step towards the grid of the future. But how will utilities build new business models to take advantage of these opportunities? No utility seems to have fully figured it out yet. Expect the question to preoccupy utilities and state regulators in the coming years.



*Very few utility executives think their utility should be investing further **in coal gasification, carbon capture and storage, and environmental upgrades.***

BUSINESS AND REGULATORY MODELS

If the industry could regulate itself, what would it look like?

Surprise; surprise. Most utilities would rather have performance-based ratemaking over the traditional cost-of-service model. This underscores the contentious debate over the best approach to ratemaking in today's new paradigm of low electricity sales and high penetrations of rooftop solar. Utilities may not agree on which solution is best, but the results show that many view the old way of doing business as a hindrance to progress.

Whatever the preferred regulatory model, utilities don't expect the status quo to hold. Utilities will move away from the traditional vertically integrated utility model. Since the restructuring of the electricity industry in the 1990s, many utilities have been pursuing

"back to basics" strategies by focusing on rate-regulated activities. While most of the utilities we surveyed currently operate under a traditional vertically integrated model, few see that as the likely model for their utility 20 years from now.

Q. If you were able to choose, which regulatory model would you prefer for your utility?

44% TRADITIONAL
COST-OF-SERVICE
REGULATION

56% PERFORMANCE
BASED-RATE-
MAKING

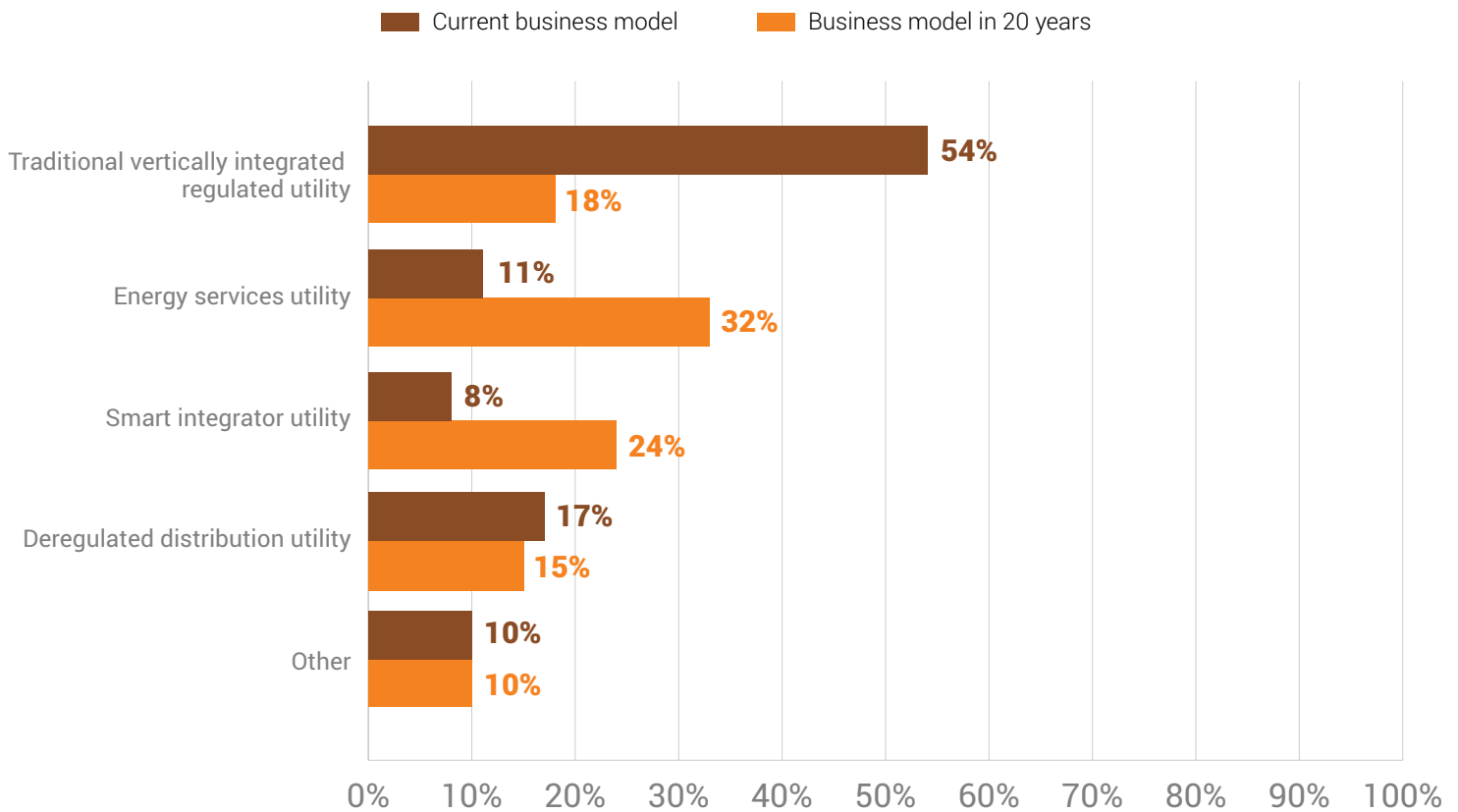
A significant number of utilities see themselves becoming smart integrators. The smart integrator utility is a deregulated entity responsible for building, operating, and maintaining the smart grid platform on which new services, technologies, and marketplaces will rely. The smart integrator utility, whose revenue is decoupled from electricity sales, is expected to fulfill energy efficiency mandates.

An even greater number of utilities see themselves moving to an energy services utility model. Under such a scheme, the utility would not make its money by selling a commodity, but by operating the smart distribution platform and providing value-added services to the consumer. Energy efficiency would become the utility's mission and profit center.

Both models are a big step away from today's utilities that make money from selling electricity, not saving it. The industry appears keen to build business models around new opportunities such as distributed energy resources, energy efficiency, and demand response.

Despite the excitement around new business models, Hawaii stands as a cautionary tale for the rest of the industry. Its unique isolation and reliance on fuel oil led to the rapid and sudden proliferation of distributed generation. The percentage of Hawaiian Electric customers who have installed rooftop solar has surpassed 10% — the so-called tipping point at which industry experts believe utilities will experience significant operational and financial issues.

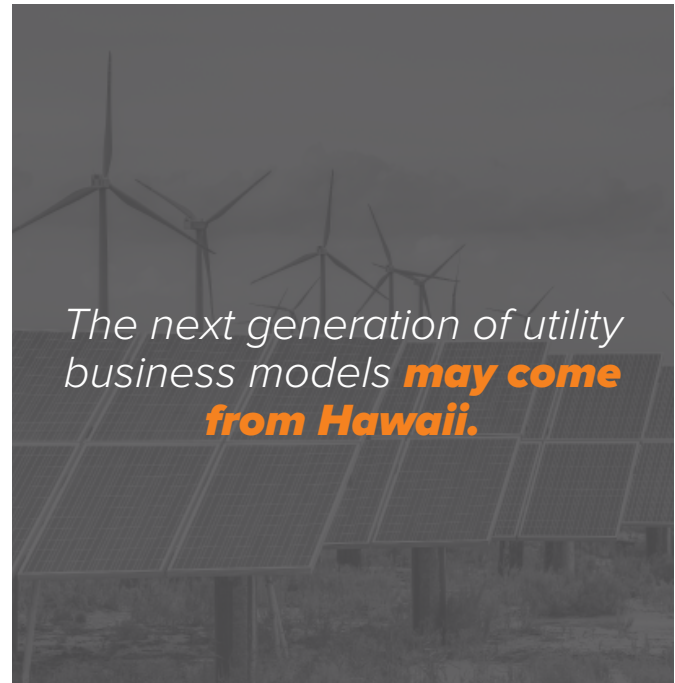
Q. What do you think your utility's business model will be in 20 years?



Hawaiian Electric has been struggling to figure out a business model to adapt to the changes. Regulators turned down its most recent integrated resource plan, calling it unsustainable and overly reliant on a string of capital projects with no “strategic focus on the clear issues facing the utility.”

In late 2014, NextEra Energy reached a deal to buy Hawaiian Electric amid speculation that NextEra would use Hawaii as a testing ground for new business models and solutions to distributed generation and renewable energy integration issues. (A NextEra spokesman would only say the idea was “interesting” when reached for comment by Utility Dive.)

The next generation of utility business model may indeed come from Hawaii. The utilities there are tasked with solving the key challenges facing the industry well before they hit the mainland. Only time will tell what those solutions will look like.



Q. What new business models is your utility developing?

- 71%** — Energy efficiency and demand response
- 51% — Consumer information services
- 48% — Distributed generation
- 25% — Distributed system platform
- 21% — Premium power options
- 9% — Other



ELECTRICITY SALES

The drive toward new regulatory models stems, in part, from the stagnant growth of electricity sales.

After the recession, optimists predicted electricity demand would rebound with economic recovery, utilities would build new power plants, and profits would once again flow from greater electricity sales.

That no longer appears to be the case. The majority of utilities we surveyed reported little to no load growth in their service territories. The industry is struggling with the rise of energy efficiency and rooftop solar, both of which eat away at demand for utility power.

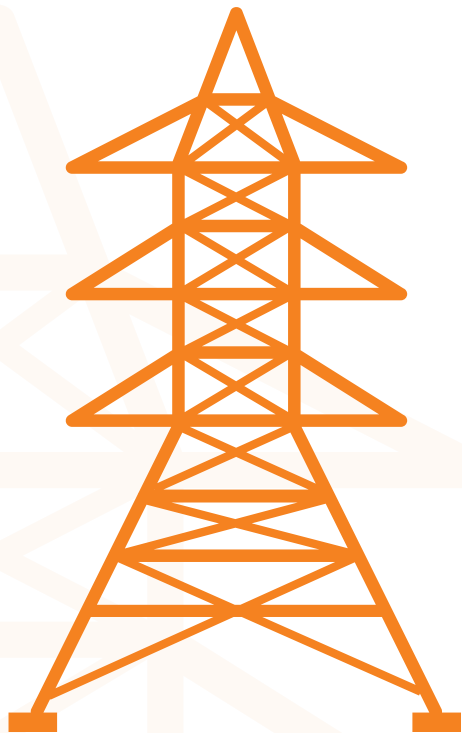
The healthiest areas of load growth were seen in the central Southern states, where the Electric Reliability Council of Texas (ERCOT) and the lower half of the Midcontinent Independent System Operator (MISO) are located. The population in those regions is growing faster than in most other states, according to figures from the U.S. Census Bureau.

Unsurprisingly, non-contiguous states reported the highest percentage of utilities that are seeing negative load growth. Distributed energy resources are more economical in those regions due to the higher costs of electricity.

*The U.S. electric utility industry is struggling with low sales numbers **as a result of the growth of energy efficiency and rooftop solar.***

The question, as always, is: What should utilities do about depressed electricity sales? No clear solution emerged from the survey. The most frequent answers from utilities were to develop new business models, regulated or otherwise.

Beyond that, there was smattering of interest from utilities in revenue decoupling, increased fixed bill charges, and premium power sales. Only 5% of utilities viewed lost revenue adjustment mechanisms as the best way to mitigate stagnant load growth, perhaps because the approach is so complex.



Q. What load growth trends are your utility seeing in its service territory?

- 68%** — We are seeing minimal or stagnant load growth
- 23%** — We are seeing significant load growth
- 9%** — We are seeing negative load growth

The outlook is dim for any industry when product sales fall — especially if there is little hope that sales will rise again in the near future. When it comes to the challenge of stagnant load growth, the utility industry is entering an adapt-or-else period.

Energy efficiency will likely need to be core to the utility of the future, but it's not yet clear how regulators will enable utilities to make it happen. Many policy-makers argue that an investor-owned utility cannot push both electricity sales and savings. Revenue decoupling is one way to mitigate the conflict of interest, although efficiency advocates argue that it removes disincentives to efficiency without actually incentivizing it.

Regulators will need to find new ways for utilities to monetize energy savings if they are to move beyond the commodity-based business models of the past. Forward-thinking utilities will even look to provide value-added services behind the meter — if regulators will allow it.

What is the best way for utilities to mitigate the impact of stagnant load growth?

Develop new unregulated business models	23%
Develop new regulated business models	22%
Revenue decoupling	17%
Increased fixed bill charges	14%
Offer premium power options to customers	13%
Lost revenue adjustment mechanism	5%
Other	5%

*There is no clear solution for low electricity sales growth. Tellingly, the most common answer from utility executives **was to develop new business models.***

FUEL MIX

Long dominated by coal power, the U.S. energy mix is changing fast.

The utility industry's fuel mix is changing in line with today's government policies: more natural gas, less coal, greater energy efficiency, and more renewables.

State portfolio standards are the biggest driver of utility investment in renewables.

Most utilities predict they will increase the amount of natural gas, wind, and utility-scale solar in their fuel mix over the next 20 years. A whopping 84% of utilities predict that distributed energy resources will also increase as part of their overall fuel mix.

The industry's bullish take on natural gas, energy efficiency, and renewables likely stems from the Clean Power Plan, the Environmental Protection Agency's (EPA) proposal to reduce carbon dioxide emissions 30% nationwide by 2030.

In what is one of the biggest surprises in Utility Dive's State of the Electric Utility survey, utility executives do not oppose the Clean Power Plan in great numbers. In fact, over 60% think the emissions regulations are acceptable as is — or should be even more stringent. This sentiment — that utilities largely support the Clean Power Plan — dovetails with another surprising reason that utility executives favor investing in clean energy: sustainability.

Concern over federal emissions standards has heightened over the last year, however. The percentage of utilities that listed emissions rules as one of their most pressing challenges doubled since last year's State of the Electric Utility survey.

With the Clean Power Plan taking center stage, utilities see a diminished future for carbon-intensive fuels. The majority of utilities expect the percentage of coal in their fuel mix to decrease. Nearly half see oil declining as part of their fuel mix, presumably as diesel peaking plants give way to cleaner and cheaper alternatives like demand response.

Nuclear power is in limbo — and the Clean Power Plan only muddies the waters further. On the one hand, nuclear is one of the plan's building blocks, which bodes well for its role in the future supply mix. At the same time, it is hard to envision the U.S. embracing a nuclear renaissance after its decades-long resistance to the fuel, especially amid the ongoing push to shut down plants like Indian Point in New York. Utilities surveyed reflected the regulatory uncertainty surrounding nuclear in the results — 16% see an increase in nuclear, 21% see a decrease, and 35% see no change in nuclear as part of their overall fuel mix.

*The percentage of utilities that listed **emissions rules as one of their most pressing challenges** doubled since last year.*

Natural gas is cheap and abundant — the U.S. has enough of the fuel to last about 85 years at the current rate of consumption. It accounted for half of the new generation in 2013, and the Energy Information Administration expects gas-fired generation to keep growing at 1.3% annually through 2040.

The U.S. electric utility industry plans to increase natural gas, solar, wind, distributed energy resources, and energy efficiency as part of its fuel mix over the next 20 years. Meanwhile, the industry expects to use significantly less coal and oil over the same period.

How do you think your utility's fuel mix will change over the next 20 years?

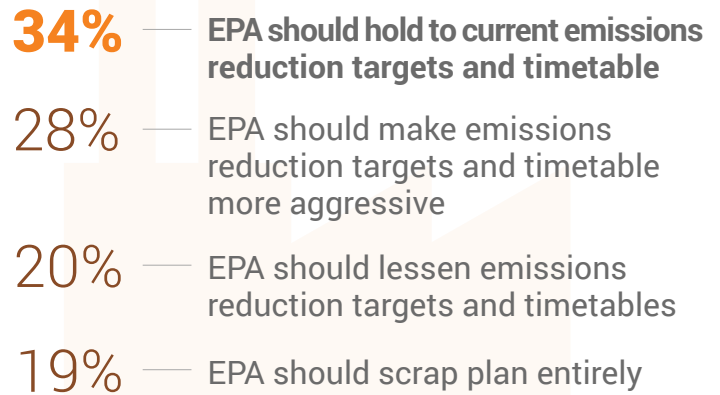
	Stay the same	Increase	Decrease	N/A
Natural Gas	14%	74%	7%	5%
Wind	17%	72%	4%	7%
Utility-scale solar	12%	79%	2%	8%
Hydro	62%	15%	8%	15%
Coal	9%	3%	77%	35%
Nuclear	35%	16%	21%	27%
Oil	17%	3%	45%	11%
Distributed energy resources	5%	84%	2%	9%

But the last winter provided the industry with a worrisome reminder of the problems associated with relying on natural gas. Bitter cold sent electricity prices shooting skyward when parts of the country could not secure enough natural gas for their power plants. While the extreme cold may have been an anomaly, few are betting on it. Hard-hit areas like New England are fervently seeking ways to avert a repeat of the natural gas scarcity they experienced during the 2014 polar vortex.

When it comes to the U.S. fuel mix, it's never easy to gaze into the crystal ball. What once seemed to be reasonable and well-educated guesses are often later proven to be woefully wrong. Just 10 years ago, few imagined solar would grow so fast — or that coal would fall so fast. The utility view here is probably best seen as a snapshot in time — a projection of what will happen if today's policies, markets and technologies stay on their present course for the next 20 years.



Q. How should the EPA move ahead with its plan to reduce carbon dioxide emissions 30% nationwide by 2030?



Q. What is the most compelling reason for utilities to invest in clean energy, such as renewables and energy efficiency?



DISTRIBUTED ENERGY RESOURCES

The greatest challenge for the utility industry may be its greatest opportunity.

The vast majority of utilities see distributed energy resources as an opportunity. The sentiment is near universal across the country. The numbers never dipped below 70% in any region we surveyed.

It's clear that utilities want to find ways to incorporate distributed energy into their business models rather than letting competitors own the sector. But while there is clearly money to be made in distributed energy for utilities, there are operational hurdles to overcome, policy disputes to settle and no proven business model in sight.

Of the utilities that see an opportunity, the majority are not sure how to build a business model around distributed energy resources. For the most part, utilities favor the more traditional approaches of partnering with independent third-party vendors and making regulated investments.

The latter approach is highly controversial. In Arizona, two utilities — Arizona Public Service

What is the biggest challenge your utility has with regard to distributed energy resources?

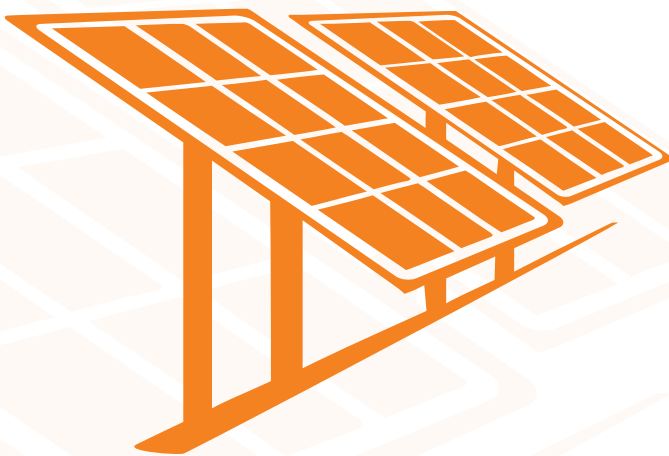
Grid Operations	32%
Profitability	32%
Resource Planning	29%
Other	8%

and Tucson Electric Power — have received approval from regulators to offer utility-owned solar to their customers. It is unclear if regulators in other jurisdictions will be willing to approve similar programs.

Nearly half of the utilities surveyed are willing to try the new — and more daring — approach of buying power from customer-sited distributed energy. This is an intriguingly high percentage, given that detractors argue the practice may jeopardize grid reliability if pursued to a large degree. Utilities pursuing this strategy must answer

Q. Does your utility see distributed energy resources as an opportunity?

- 56%** — Yes, we see an opportunity, but aren't sure how to build a business around DER
- 33%** — Yes, we are already building business models around DER
- 12%** — No, we do not see an opportunity



the difficult challenge of system planning with variable generation from independent customer-sited resources.

48% of utilities are developing new business models around distributed generation.

Less than half of the utilities surveyed are open to the idea of launching competitive business arms to offer distributed energy resources to customers. Though utilities often have unregulated subsidiaries, it remains a controversial practice with opposition from independent companies who say utilities will inevitably favor an affiliate no matter the walls built by regulators. And if history is any indicator, competitive utility spinoffs typically don't do very well. It's just not a utility's core competency.

Given this backdrop, it's easy to see why New York's Reforming the Energy Vision (REV) rulemaking is getting so much attention. The REV tries to solve many of these problems through a market mechanism for distributed energy resources similar to the one used for wholesale power markets.

The REV is complex — and radical. It could lead to a grid where distributed energy and energy efficiency are primary resources and centralized generation is secondary. Not every state is ready to make such a bold move, but if REV moves forward in 2015 as envisioned, it will likely redefine the debate over the grid of the future in state regulatory commissions across the country.

How should utilities invest in distributed energy resources? (Check all that apply)

Partner with third-party providers	55%
Make regulated investments in DER where possible	53%
Procure power from customer-sited DER	46%
Compete through non-regulated subsidiaries	37%
Utilities should not invest in DER	6%
Other	3%

What is the best way to compensate rooftop solar for the electricity it sends back onto the grid?

Net metering at the wholesale rate	42%
Net metering at the retail rate	18%
Value of solar tariffs	17%
Feed-in tariffs	11%
Rooftop solar should not be compensated	7%
Other	6%

GRID SECURITY

Grid security loomed large for utilities in 2014.

A leaked federal report found a strategic attack on just nine substations could cripple the nation's electric grid and leave large swaths of the country without power. This came on the heels of a sniper attack on a Pacific Gas & Electric substation in Silicon Valley in 2013.

Perhaps even more daunting is the growing volume of cyberattacks reported by Homeland Security against energy facilities. The energy sector was the target of more than half of all cyberattacks in the U.S. from October 2012 to May 2013.

53% of utility executives report their utility's grid network is not adequately protected from physical and cyber attacks.

Although utilities see themselves as the primary line of defense in securing the grid, most say their grids are not adequately protected from physical and cyber attacks. The vast majority of utilities surveyed are increasing spending to prevent attacks.

Pressing questions loom about how easily utilities can recover security costs. Grid security is a new world for utilities and there is minimal federal guidance available, as the Connecticut Public Utilities Regulatory Authority pointed out in a report in April. The responsibility falls to state commissions, which have little experience preventing terrorism.

When it comes to grid security, the stakes are much higher than, say, energy efficiency or employee benefits. Utilities will need to spend wisely and be prepared to educate regulators as they make the case for new security investments in upcoming rate cases.

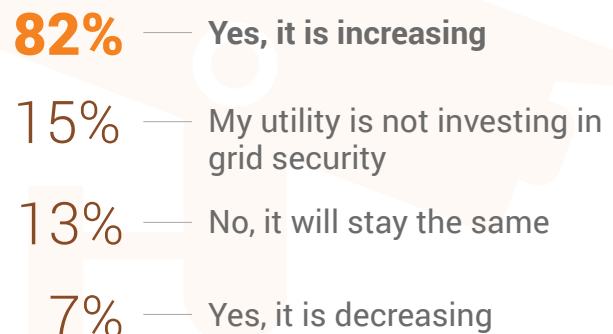
The challenge for utilities is that hackers are continuously revising their weaponry, forcing IT experts to reframe their defenses. Meanwhile, the very technologies meant to protect the grid from storm-related failures — such as microgrids and smart grid technologies — open new doors to cyberattacks.



Q. Who do you think should be primarily responsible for grid security?



Q. Is your utility's investment in grid security changing?



THE AGING WORKFORCE

The U.S. utility industry faces a shortage of skilled workers as older, more experienced employees retire.

Within utilities, concern exists that too few young workers are available to move up the ranks. Only 7% of respondents to this survey were under 30, while 75% were 40 or older. With the U.S. economy on the rise, the problem may worsen as competition heightens for younger workers with technical skills.

Only 7% of utility executives we surveyed were under 30, while 75% were over 40.

It may be even more troubling at the top. A 50% increase in executives who became eligible for retirement occurred between just 2011 and 2012, according to PricewaterhouseCoopers.

What is your age range?	
29 and under	7%
30-39	18%
40-49	22%
50-59	35%
60-69	17%
70 and over	1%

The dearth of young employees comes at a particularly bad time for the industry. Utility operations are becoming more complex with the advent of newer, smarter technologies. Utilities must adapt, but its older workforce is accustomed to running the grid the old-fashioned way. This perpetuates “the conservative, consensus driven culture that has challenged innovation in the industry,” according to PricewaterhouseCoopers.

Utilities are struggling to identify the best way forward in a changing market. Part of that challenge springs from the age of the industry’s workforce and the lack of younger and more digitally savvy forward-thinking employees. If the industry wants to reinvent itself, one of the first steps to take is to renew its workforce.



Q. What best describes your feelings about the age of your utility's workforce?

- 53%** — I am concerned about the fact that it is growing older
- 36%** — I am optimistic because my utility is working to recruit younger workers
- 11%** — I don't think my utility needs to worry about an aging workforce

THE CUSTOMER RELATIONSHIP

Utilities are entering an age where they will need to better understand, engage with and ultimately service their customers.

Unfortunately, utilities largely engage their customers in traditional ways and only as needed, such as for billing and customer support. Let's face it — no one likes paying the electric bill and customers usually only call support when they have a problem. Similarly, 49% of utilities engage their customers around power outages — not exactly what one would call a positive moment for the customer, though it remains a necessary endeavor.

*The utility industry has entered an age where they will need to **better understand, engage with and ultimately service their customers.***

Perhaps indicative of the future, many utilities cited community education and outreach, energy conservation tips, service offerings, and discounts and promotions as ways they engage their customers. These are all types of services that utilities will need to offer their customers if they choose to pursue a less commodity-focused business model, as many of the executives who took Utility Dive's State of the Electric Utility survey have indicated.

It's common industry wisdom that customers simply don't care about energy unless they get an exorbitantly high bill or are hit by a power outage. That may be true today, but a report from New York's REV proceeding suggests that access and technology play a big role in engaging customers. The industry is just beginning to install the technology — and create the market access — that could give customers new and important reasons to not only care about, but engage with their energy usage.

What are the top ways in which your utility engages its customers? (Check all that apply)

Billing and customer support	72%
Community education and outreach	63%
Conservation tips and peer comparisons	58%
Energy usage data	58%
Service offerings	50%
Power outages	49%
Discount and rebate promotions	45%
Demand response events	34%
Other	2%



Q. Is your utility's investment in customer engagement changing?

76% — Yes, it is increasing

17% — No, it will stay the same

4% — Yes, it is decreasing

2% — My utility is not investing in customer engagement

LOOKING AHEAD

The U.S. electric utility in 2015 is transforming to become the utility of the future.

The utility of the future will have a diverse fuel mix, including solar, wind, natural gas, energy efficiency and distributed energy resources. The utility of the future will provide the smart grid platform for new energy technologies and services. The utility of the future may even provide some of those services and technologies to the consumer, who is ultimately at the heart of everything the utility of the future does. The utility of the future's revenue will not come from electricity sales, but electricity savings, in order to better align the utility business model with societal goals.

There will be no one path to the utility of the future, given that each utility is governed by at least one of 50 different state regulatory bodies. But the foundation will likely be the same across the country. The outcome of New York's REV, in particular, could prove instructive for utilities and regulators across the country.

Utilities know a smart distribution platform and new energy services are the foundations of the industry's future. It's simply a matter of figuring out how they will make it happen.



— share —

