Power play:
Three new models for growth in the utilities industry
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Traditional business models that have dominated the utilities industry for decades are struggling to produce the results of the past. But three emerging models, supported by digital capabilities, are providing new opportunities for growth, profitability and customer engagement.

The end of the status quo

Five forces are chipping away at utilities' traditional business models: new energy technologies, non-traditional competitors, new consumer expectations, new regulatory pressures and rising costs (see Figure 1). In response to these threats, utilities need to rethink their business models. If they do not, their prospects for future growth could be limited.

From obligation to optimization

In the near future, utilities' foundational mandate—the obligation to serve—could be replaced by a directive that more appropriately reflects the current realities. Fifteen years ago, telecom companies, facing pressures from wireless and voice-over-IP technologies, migrated from telephony to content, data transport and digital services. In the new energy world, utilities face a similar transition. New business models should focus not just on transporting and delivering energy, but on optimizing energy sources, distribution systems and demand, while addressing customers' unique needs.

Accenture has identified three emerging "power plays" utilities can pursue to unlock future growth. No single model will work for all utilities, and the options outlined are not mutually exclusive. We believe utilities should consider the merits of each as they make business portfolio decisions.
## Threats and Impact

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<th>Threats</th>
<th>Impact</th>
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<td>Disruption in demand from new energy technologies</td>
<td>Changing role and scope of services as a source of growth</td>
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<td>Competition from new players in the value chain</td>
<td>Evolving ecosystem with business model and partner opportunities</td>
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<td>Change in customer behaviors and expectations</td>
<td>Simple, engaging digital customer experience</td>
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<td>Motivation and goals of regulators and policymakers</td>
<td>Redefining mission, vision and role of utility</td>
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<td>Rising costs from increased complexity and obligations</td>
<td>New cost structures from all-digital platform</td>
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### Figures

- **Figure 1.** Five threats eroding utilities’ business models.
  - **Disruption in demand from new energy technologies:** 15% potential of demand reduction from rapidly evolving energy technologies by 2025.
  - **Competition from new players in the value chain:** 57% proportion of consumers likely to purchase connected home products and services in the next five years.
  - **Change in customer behaviors and expectations:** $18-48b €39-61b potential revenue at risk based on load reductions in the United States and Europe.
  - **Motivation and goals of regulators and policymakers:** 89% increase in the cost of customer service between 2005 and 2013 for top quartile utilities in North America.
  - **Rising costs from increased complexity and obligations:** 87% proportion of utilities executives expecting competition from new entrants in distributed generation.
Power play 1:
Low-carbon energy producer

This business model should help accelerate the transition to a low-carbon energy supply market in both regulated and deregulated asset portfolios. Successful players would have scale and a strong balance sheet. Traditional power generators may currently occupy this space, but their portfolios would continue to change considerably. By necessity, these players will likely come to resemble global mining or commodity chemicals companies, with leading operating capabilities and global operating models that reduce fixed costs and improve capital project performance.

Successful low-carbon energy producers would:

• Be equipped to make strategic portfolio choices that would allow them to shift from centralized/carbon-intensive to decentralized/lower-carbon supplies (see Figure 2).

• Establish global operating models (and shared support services) to manage a broader array of operating assets.

• Demonstrate leading capabilities in traditional areas such as asset management, continuous process improvement, capital project management and commercial optimization.

• Transform themselves with digital capabilities that support real-time analytics, digitally-enabled workforces and technology innovations.

Utilities that adopt this model would grow by expanding their asset range, penetrating new markets and managing assets more profitably. Some utilities are already making moves.

In Germany, EON SE is spinning off its conventional and nuclear power generation businesses into a separate company to refocus its business on renewables, distribution networks and customer solutions.6
Power play 2: Distribution platform optimizer

This business model clearly illustrates the industry’s shift from an “obligation to serve” to a “commitment to optimize.” It empowers utilities to serve as energy clearinghouses and address consumer demand with optimal sources of supply. Distribution platform optimizers would choose the appropriate sources and operating practices to meet demand, while providing access to third parties, encouraging adoption of interconnect standards, and facilitating interactive demand management practices (see Figure 3).

Figure 3. Strategic choices – role options.

<table>
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<tr>
<th>Smart grid operator</th>
<th>Decoupled integrated utility</th>
<th>Platform access provider</th>
<th>Distribution platform optimizer</th>
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<tbody>
<tr>
<td>New technology in old management paradigm - insufficient to change overall economics</td>
<td>Removes volume bias and disincentive to optimize but does not reward optimal outcome</td>
<td>Provides neutral access to network to independent players; sub-optimal outcome because of limited demand integration</td>
<td>Provides optimal outcome for overall system; provides access to third parties; facilitates coopetition among network and service providers to encourage adoption of interconnect standards</td>
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Transitioning to this model would require traditional distribution companies to:

- Collaborate with regulators and other stakeholders to develop a performance-based model for distribution.
- Manage their operations to key outcome metrics such as renewable integration, system utilization, demand smoothing and total system losses.
- Adopt “intelligent network” capabilities, including real-time network controls, distribution automation and device-level intelligence.
- Facilitate the adoption of key industry standards for integrating energy technologies.
- Transform themselves with digital capabilities that enable asset analytics, storage integration and digital field work.

Utilities adopting this model would grow as regulated assets grow, with rewards for achieving superior results in outcome-based performance metrics. Some utilities are pursuing elements of this model. For example, some utility pilot projects are demonstrating the use of digital devices and battery storage to integrate renewables on the network, or are utilizing electric vehicles as storage solutions. These efforts are the front edge of the transformation of the distribution company.
Power play 3: Energy solution integrator

Customers want innovative solutions to help them efficiently manage energy in their homes and businesses. Nearly three-quarters would turn to their energy provider for solar products, monitoring and control solutions, as well as support for electric vehicles. The energy solution integrator model would provide customers with competitive choices across a variety of evolving service categories (see Figure 4).

Utilities that position themselves as branded solution integrators would provide new services to help customers not only optimize energy production and use, but also improve greater control and cost savings. For example, utilities could install, finance, run and maintain energy assets such as distributed generation and electric vehicle charging stations. As technologies and customer behaviors continue to evolve, new service opportunities are likely to emerge.

Successful energy solution integrators would:

- Make strategic choices about the breadth of services they provide.
- Close the "trust gap" by building strong brands and superior customer execution capabilities.
- Focus on innovative offerings that respond to changing customer needs and growing demands for technology-enabled services.
- Establish innovative strategic partnerships, along with strong capabilities in vendor and contract management.
- Build digital capabilities that support multichannel interaction models, customer analytics and real-time decision making, digital marketing and service fulfillment.

Utilities adopting this model would grow by achieving greater scale and offering a broader scope of services across an extended geographic footprint.

British Gas's heating control service, dubbed Hive Active Heating, allows customers to change their thermostat and hot water settings via a tablet, laptop or mobile device. The Hive app illustrates the solutions approach by providing a number of unique features like geo-location sensors that remind users to turn on heat before they arrive home and frost protection services that automatically turn the heat on when temperatures fall below a certain level.
Be a power player

At Accenture, we believe there is tremendous opportunity for utilities willing to explore these emerging business models. To thrive in the years ahead, utilities need to prepare today by:

• **Making strategic choices.**
  Executives need to evaluate new models and choose a strategy and portfolio of plays that makes the most sense. It is time for them to ask hard questions about future growth: What are our growth prospects under our current business model? What should be the scope of our asset and service portfolios? Do we have the capabilities and talent we need to grow?

• **Building "no-regrets" capabilities.**
  As utilities define a new vision, they need to invest in building capabilities that will protect earnings and improve performance today, and also drive results in the business models they ultimately choose. These "no-regrets" focus areas include grid optimization, regulatory and tariff reform, and new customer interaction and services models.

• **Establishing a digital operating model.**
  Digital capabilities transform consumer interactions, increase consumer engagement, and lower cost to serve. They provide entirely new ways of working across assets, managing the grid and workforces, and serving customers. Importantly, they are already lowering barriers to entry for competitors. Being digital will play a critical role not only in the success of new utility business models, but also in helping utilities achieve their business objectives now.

Taking these steps would allow utilities to develop a clear strategy and a roadmap that lays out the strategic choices, investments and capabilities required to move from traditional to digital operating models. With that strategy and roadmap in place, utilities can plot a trajectory of growth for the years ahead.
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8 Bob Dormon, "British Gas robo home remote gets itself into hot water," The Register, September 26, 2013, www.theregister.co.uk.

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