

RECHARGING UTILITY OPERATIONS

THE RISING IMPORTANCE OF BEING AGILE AND EFFECTIVE

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Utilities that defend the status quo are almost assuredly going to miss emerging opportunities, delaying their evolution to operating models that serve changing markets. You can't reverse macroeconomic trends or shifts in market demand. To compete with a new breed of energy service providers armed with rapidly advancing technology requires flexibility in operations, simplified workflows, investment in the IT foundation, accountability in the organization and a hard-nosed, competitive approach to the market.

Utilities have taken action over the past few years to address some of the challenges. As these issues evolve, however, complacency is not a strategy for success. Given the recent structural and market changes in utility distribution environments across the world, we recommend utility executives take a fresh, comprehensive look at their strategies. Below are some actions that, in our experience, can make a difference:

Review or recast your corporate strategy.

If you have not undertaken a comprehensive review of your corporate strategy in the past two or three years, it is long overdue. Too many fundamental changes have occurred in the industry to rely on a 2012 vintage strategy.

Align your operating model to the corporate strategy.

An updated strategy often requires new ways of working and a new operating model (or an interim model).

Build your future capabilities today.

The revised operating model may expose gaps in capabilities. Fill the gaps by hiring, training and grooming the next generation of utility leaders. Many utilities have not hired significant numbers of young workers



MOUNTING UTILITY CHALLENGES: FROM SOLAR TO SHALE TO GOOGLE

REGULATORY
UNCERTAINTY**Environmental regulations related to water, emissions and incentives for renewables are uncertain.**

US regulations are uncertain. EU hasn't yet agreed to new targets for 2030.

The EU set emissions targets for 2020 (reduce emissions by 20 percent). But the 2030 standards are still being negotiated. The US Environmental Protection Agency proposed reducing carbon dioxide emissions by 30 percent below 2005 levels by 2030, but firm targets haven't yet been set.

Demand is bifurcated between developed and developing nations.

Electricity demand in developed nations is flat or falling. Industrial and commercial use slowed with the economy, and users have become more efficient. By contrast, demand in developing nations is rising as new consumers plug in to the grid and economies grow.

ELECTRICITY
DEMAND

US annual growth of 0.7 percent is expected through 2020. Japanese demand is seen as growing 2 percent a year through 2030. Meanwhile, German demand is expected to contract by 0.2 percent every year. Conversely, demand in developing nations is growing rapidly, with Indian demand forecast to double. Chinese demand should rise by 115 percent through 2030.

Solar panel costs are falling. Incentives and third-party financing and operation for renewables have emerged. The cost is shifting to non-users.DISTRIBUTED
GENERATION

Distributed generation is rapidly increasing and peak demand is eroding, putting more stress on the distribution grid.

In the US, distributed generation could represent 2 percent of capacity by 2016. More than 290 gigawatts of Europe's capacity is expected to come from small-scale, household solar installations by 2030.

AGING
WORKFORCE**Utilities face a massive skill gap, with most of the workforce set to retire in coming years.**

In the US, 30 percent of utility employees are eligible to retire in less than five years. In the EU, 30 percent of utility workers are older than 50.

In response, utilities are outsourcing more, simplifying and automating processes, and reinvigorating recruiting.

RISING
OPERATING
COSTS**The unit cost of electricity is rising due to required investments in major initiatives related to infrastructure, regulatory compliance and cybersecurity.**

Retail electric rates are up due to storm response and catch-up infrastructure investments. Global investment in transmission and distribution infrastructure is forecasted to grow annually by 5 percent through 2016.

UPGRADING
INFRASTRUCTURE**New technologies and patterns of generation create demand for different types of infrastructure.**

Utilities are making new, large-scale investments for needs that may not be timely.

The US needs to spend \$1.5 trillion to \$2 trillion to modernize its power grid by 2030. The EU must invest \$1.35 trillion by 2020 to modernize its grid.

RENEWABLE
ENERGY
MANDATES**Standards and regulatory mandates are driving investment in renewables.**

Investment in renewable generation is rising.

Investment in renewables is expected to increase exponentially. Through 2030, the Americas are expected to invest \$816 billion while the EU will invest \$961 billion.

UTILITY
EARNINGS
PROSPECTS**The North American utility sector has delivered strong, high-quality earnings and dividend growth. In Europe, new market dynamics have destroyed much of the value of utilities.**

Most US utilities meet targets by investing in infrastructure and building their rate base. In the EU, large-scale renewables and distributed generation have hurt utility earnings.

US utilities are expected to deliver the 4-6 percent annual earnings growth. As renewables proliferated during the past five years, the top 20 utilities in Europe lost half of their value as they shuttered and wrote down many of their coal- and gas-fired assets.

NATURAL
GAS PRICES**With the advent of shale gas in the US, supply issues in Europe and higher demand in Asia, gas prices in recent years have bucked historical trends.**

The US will spend 24 percent of its investment in new power capacity on natural gas assets through 2026. In Asia, gas capacity is forecast to double through 2030. This is still less than coal-fired growth, as high gas prices prevent a larger build-out. In the EU, gas generation is forecast to shrink through 2030, from 25 percent of generation to just 17 percent, given the low cost of renewables and high gas prices.

EMERGING
COMPETITORS**As telecom and cable companies battle for home Internet market share, home energy management is becoming an attractive service offering.**

Siemens, Schneider and SAS are ahead of utilities with their home energy management offerings. Google paid \$3.2 billion for Nest to pursue the \$400 billion retail energy market.

Source: Oliver Wyman analysis.

in several decades, despite a looming wave of retirements. Executives must make utility opportunities interesting enough to attract the best and brightest of the next generation of employees, while protecting the best elements of the corporate culture to retain the most experienced people.

Manage risk more effectively. Utility executives will have to make some big bets in the next few years. Now is the time to put the right level of risk management in place to mitigate, allocate or accept the risks they are prepared to manage.

Simplify, simplify, simplify. Examine all aspects of the business, including technology and key operational and support processes. Streamline and simplify the work, outsourcing non-core activities and eliminating or automating low-value tasks. This will allow your employees to focus on higher-value work. Often, extra steps in key processes may have been required to meet regulatory compliance or temporary needs, but once those issues were resolved, the process ceased to evolve. Enormous latent value is locked in highly manual and overly complex processes.

Harden the infrastructure. Improve utility infrastructure with investments that increase security, reliability, flexibility and speed, while also reducing future maintenance costs. Information is the backbone of today's utilities, and increasingly will be the case among the utilities of tomorrow. Yesterday's pattern was to invest primarily in wires and pipes. The future will require significant investment in the bits and bytes required to increase operational responsiveness to changing market needs.

Focus on core strategic assets. Build on areas of historic strength and eliminate investment of time and attention in geographies or functions. Divesting non-core assets and operations that are not core to the new corporate strategy will permit increased investment in new capabilities and functions that position the company for success.

Increase accountability. Manage performance and hold your team accountable for delivering key metrics. Holding people accountable for results, while positioning them for success, is critical to increasing employee morale and retaining talent.

By developing enterprisewide strategies for change, utilities can strengthen their core businesses, build the speed and agility needed to pursue new opportunities, engage with customers to create channels for new products and services and increase the ability to respond to challenges. The executives that broaden the view of the business they are in (serving customers' energy needs versus franchised regulated distribution) and refine their strategy accordingly, will improve both performance and shareholder value.

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