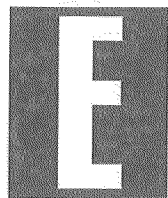


Profit and the New Normal

Delivering value
in a zero-growth market.

BY KELLY P. GALLANT, TIMOTHY P. PORTER, JACK AZAGURY



Energy trends move more slowly than most of us would like to admit but they are real and steady nonetheless ... call it the “simmering platform.” As far back as 1985, *Public Utilities Fortnightly* published an article predicting the end of parity between growth of gross domestic product (GDP) and energy demand, where utilities would sell less of their core product and focus more on efficiency, along with other products and services. This became the genesis of the “negawatt,” a means to “control risk, improve cash flow, secure market share, save operating costs, and [help utilities] become once more a declining-cost industry.” (See “Saving Gigabucks with Negawatts,” by Amory B. Lovins, *Fortnightly*, March 1985.)

It seems what’s old is new again in many respects, though our view of utilities’ future involves much more than simply driving down costs.

Just a few months ago, this magazine re-cast utilities in the same light, in an article titled “Demand Growth and The New Normal,” with the bottom-line message that, “When all is said and done, the drop in electricity demand growth seems to be permanent, not transitory” and that such a fundamental shift calls for “new thinking.” Now the conversation is moving from such observations to concrete ideas for how North American utilities can not only formulate informed responses to fundamental market shifts, but also can help lead that change.

What are the strategic imperatives for utilities now and over the next five, 10, or 20 years? What does the utility of the future look like compared to today? What will be new industry revenue streams, and which ones will go away? What can utilities do when facing a combination of external pressures, including zero or even negative growth in demand for their core products? In short, how do utility CEOs create value to protect and grow earnings in a changing world?

Eight Determining Factors

There are a number of strategic factors that will present challenges and opportunities to utility CEOs over the next three to five years.

First, there’s no longer a solid correlation between economic growth and energy demand.

Utilities traditionally have been able to absorb and offset operations and maintenance (O&M) costs with increased demand. But there’s been a breakdown in the historically strong correlation between GDP growth and electricity demand (see *Figure 1*). Flat or even falling energy consumption will be the hallmark in the developed world. The Energy Information Administration’s early release of its *Annual Energy Outlook 2013*, cuts its estimate of annual electricity demand growth in half, to 0.7

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Less demand creates a corresponding need to cut costs to make earnings, but cutting too much can trigger regulatory clawback.

percent out to 2040.¹ Less demand creates a corresponding need to cut costs to make earnings, but cutting too much can trigger regulatory clawback. Even in the face of growing financial pressures, utilities face the increasingly difficult challenge of delivering energy that’s cheap, clean, and reliable.

Second, massive investments will be required to modernize the grid.

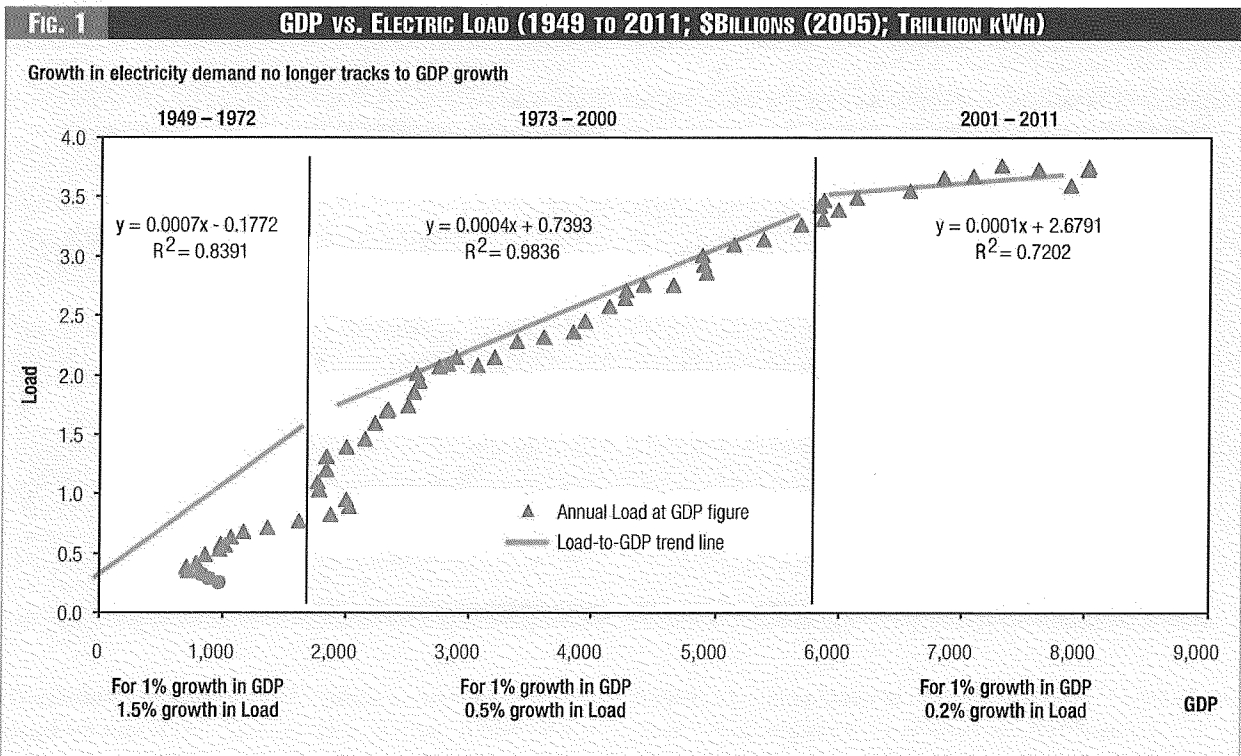
Utilities have always made money deploying big capital. Today there’s a more fundamental and significantly greater need to invest in new generation and transmission and distribution

(T&D) assets, not simply to maintain the status quo but to transform it. The Edison Electric Institute estimated that over the next two years, investor-owned utilities will spend an average of \$85 billion a year on capital expenditures—\$50 billion on new generation and upgrades, \$10 billion on transmission, and \$25 billion on distribution.²

The traditional method of making bets and then going back to ratepayers through the regulator likely won’t pay for the entire transition. What new technologies could reduce projected capital spend, such as distributed generation to reduce the need for substation upgrades? What new and more exotic forms of financing will emerge to pay for such massive upgrades and infrastructure in the future—for example master limited partnerships or real estate investment trusts (REIT)?³

The surge of renewables and all that implies (storage, electric vehicles, distributed generation, network optimization), along with the increased exposure from natural disasters (which cost

1. “Shrinking demand growth may be new normal,” *Megawatt Daily*, Jan. 14, 2013.
2. “U.S. power industry to invest \$85 bln annually in electric grid,” *Reuters News*, Feb. 6, 2013.
3. “Green REITs, MLPs, and Up-Cs: Tax-efficient capital vehicles for unregulated utility investments,” *Fortnightly’s Spark*, May 2013.



the U.S. economy as much as \$55 billion annually), will continue to highlight the grid's fragility.⁴ Figure 2 spotlights this country's pressing need to modernize the grid, showing that electricity reliability in the U.S. is actually below that of most developed economies.

Third, standing still likely will inhibit sustained growth in earnings.

CEOs to date have been compensated for delivering predictable earnings and stability. In terms of total return to shareholders, utilities have done fairly well, outperforming the Standard & Poor's Index frequently and doing very well in those instances where the utility pays regular dividends as part of its value to shareholders; dividend payers offer shareholders greater than 50 percent higher returns (see Figure 3). Many look out over the next three to five years and believe that growth will return, but this might demonstrate a false sense of security. If traditional top-line numbers don't grow and cost savings are harder and harder to find, what then? How can utilities lift earnings?

On the one hand, utilities will need to start by considering how they can rebalance their O&M cost structure and continue to work with regulators to make the case for their expenditure plans. At the same time, they will need to assess what kind of business they really want to be, in order to focus their investments. This part of the journey requires looking broadly at the

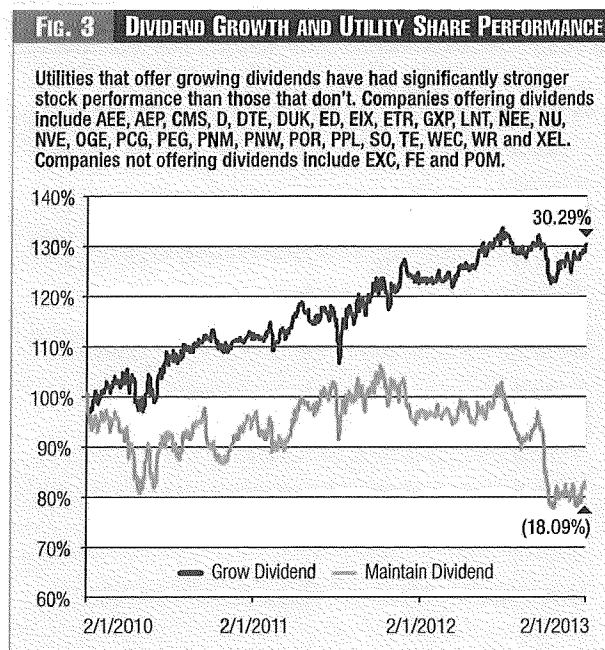
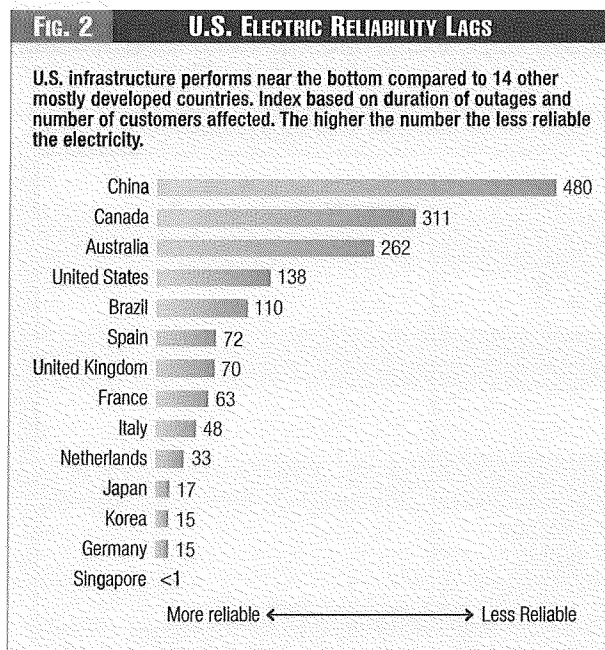
industry landscape, much as telecommunications companies had to do in the 1990s when the Internet dis-intermediated fixed line services, while also providing entirely new revenue streams, from home entertainment services to security.

Fourth, shifting supply and markets are presenting moving targets.

The natural gas boom has inverted the fuel stack for many utilities, and will significantly alter the economics for many at least for the mid-term. Coal has given way to gas as their relative proportions in the U.S. energy mix become more or less equal over the next decade—e.g., available shale gas likely will double over the next 20 years. And while the nuclear energy renaissance might not be as bright as some had hoped before Fukushima, and now with the latest pull-back in Germany, it's hard to see how the world will address long term CO2 reductions without atomic energy—starting with China.

On the renewables side, consumer interests and appetites not only for new types of (cleaner) energy but for new energy-related products and services are growing as well, giving them more control and say over their energy choices. In the U.S., the installed cost of residential solar has declined from \$6.70 per Watt in July of 2011 to \$5/W by the end of 2012 (with Germany close to \$2/W). Incentives along with this rapid price decline have made residential and community scale solar an economical alternative in some geographies. However, in the next 10 years 100 million U.S. households could have solar distributed generation (DG) available at or below grid parity

4. "Weather-Related Power Outages and Electric System Resiliency," Congressional Research Service, Aug. 28, 2012.



(see Figure 4).⁵ In addition to solar, low-cost natural gas coupled with continued improvements in technologies could result in DG fuel cells reaching grid parity across several markets before the end of the decade. The emergence of crowdsourced funding models for renewable assets could help to enable this market at the community level, while shopping websites such as EnergySage.com are already making solar photovoltaic purchasing as easy as buying an airline ticket.

Fifth, new competitors are emerging from inside and outside the industry.

Utilities are losing ground and market share on both sides of their supply chain. New technologies and customer preferences are making room for retail players, and making energy efficiency from different sources easier for consumers, for example “set-it-and-forget-it” home energy management (HEM) systems, increasingly transparent updates on consumer energy bills and usage, and energy efficient appliances. This retail-ization of utilities will increase competition for residential consumers who trust their energy providers today—probably a utility’s greatest asset in this case—but don’t necessarily look to them for the next generation of energy-related products and services; 73 percent of residential energy customers say they would buy elsewhere.⁶

Sixth, engaging regulators differently could help improve the industry.

Facing higher capital requirements and the changing role of the grid with the advent of microgrids and distributed generation,

utilities might need to change their approach to regulators. As in other sectors, the role of the regulator isn’t to save the legacy business but to support end consumers, which means that the regulators won’t be the ones to develop and champion new regulatory frameworks to support the transition. Thus, utilities will

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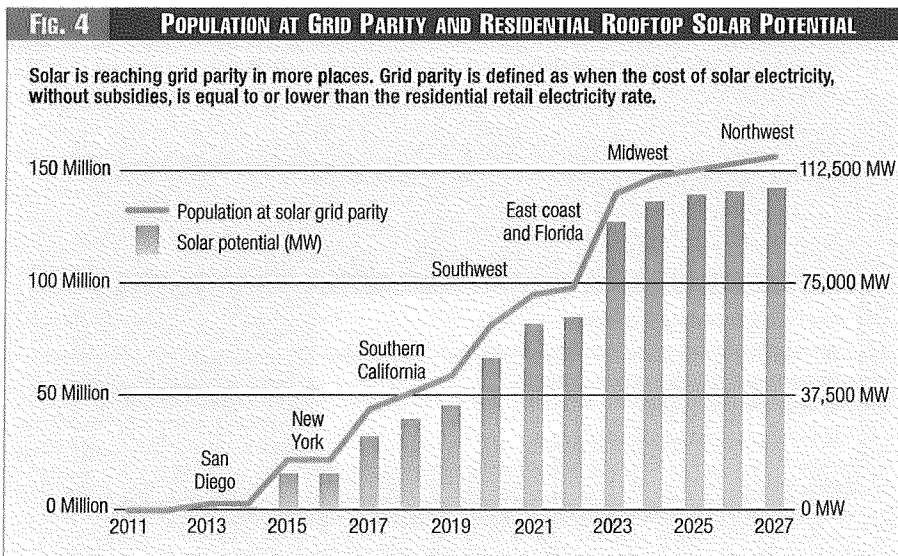
need to be very proactive, strategic, and focused in how they engage regulators. The traditional defend-and-respond approach will only prolong the fight for survival, and won’t assure victory in the marketplace. Seventh, new technologies are driving change, and will continue to do so. What technologies will come along to relieve rate pressure? New innovations and the enabling IT behind them (the cloud, mobility) will transform the energy landscape. Soon, all new appliances will have “smart” functionality (HVAC, appliances, thermostats), and we estimate that by 2030 as much as 5 percent of the U.S. vehicle fleet will be plug-in electric vehicles (that’s 12 million electric vehicles, compared to roughly 60,000 today).⁷ Further out, the cost and application of new technologies could make home-energy and grid-scale storage financially viable, and the combination of solar PV with residential energy storage could relegate the role of the grid to back-up or peak energy provider.

There is a supreme irony in those cases where utilities ignore

5. “Rooftop Revolution, Changing Everything with Cost-Effective Local Solar,” March 2012, Institute for Local Self-Reliance.

6. “Revealing the Values of the New Energy Consumer,” Accenture, 2011.

7. Based on internal Accenture research and estimates.



the potential of disruptive change through technology, when the notion that “it can’t happen to us” has turned out to be false for countless other industries—and energy technologies. While some utilities have traditionally viewed anything new as a threat to the franchise, such changes are no longer optional as the scale and scope of the fundamental shift in energy means that all aspects of the industry will change—generation (renewables), T&D (two-way grid), and retail (energy efficiency), along with the attitudes and influence of various stakeholders, from regulators to consumers.

Eighth, industry leadership and talent will need to change too.

Like other industries facing disruptive change, utilities have one of the highest turnover rates for executives.⁸ Many traditional utility executives had legal or similar backgrounds facilitating risk management and the understanding of policies and regulations that influence industry behavior. But as the competitive levers for utilities shift over time, tomorrow’s industry leaders might be engineers (focused on innovation), financiers (focused on mergers and acquisitions), or leaders in customer care (focused on the end consumer). In fact, a new cadre of utility executives is emerging, and the market looks to them for non-traditional leadership. These executives are more aspirational, and they play to win, versus conservatively seeking to shore up the base. Accordingly, such leadership will have to permeate the rest of the organization for real, effective change.

How CEOs Will Lead

Four potential strategic approaches present CEOs with a variety of overlapping options for how they might achieve high performance for their particular utility. These approaches can be described as

8. “Appointing a new CEO: Why insiders have the edge,” *Leading Company*, 7 August 2012.

“back to basics,” “smart energy,” “reinvention,” and “growth” (see Figure 5). Note that these aren’t mutually exclusive choices so much as signposts and, in some cases, sequential steps for growth. The key is to develop a point of view and model for how to address and help shape all of these changes underway.

In the first approach, “back to basics,” a utility hunkers down to focus on the core business, pursuing clean, reliable, and affordable energy within the boundaries of the current regulatory and consumer envi-

ronment. This option requires that utilities look inside their own organizations for sources of savings and margin by optimizing generation, trading, T&D, and retail services through process and technology improvements. Utilities pursuing this path would redefine what is core and non-core to their business and look to other industries for examples of process and performance leadership. Benchmarking within the utility industry is no longer sufficient.

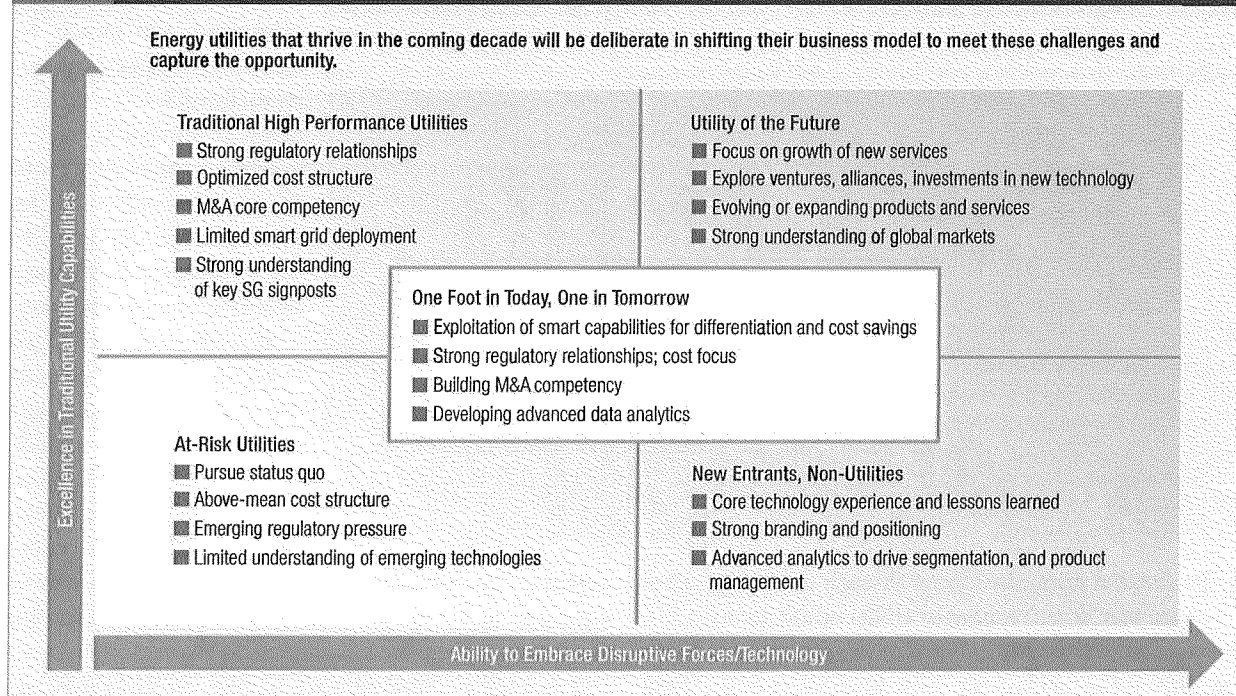
Companies in other sectors have peeled back various business processes to identify and focus on their core. For example, in the customer service space, one Internet radio leader designed its core customer acquisition, service, and retention business processes to drive growth and consumer engagement with no inbound phone calls, effectively moving all interaction to other channels and teaming partners. Similarly, certain banks no longer build brick-and-mortar outlets to serve retail customers, but instead rely solely on the Internet and phone for transactional interactions.

While utilities are somewhat unique in being so highly capital-intensive, there are nonetheless similar opportunities to improve critical but non-core functions like customer care (though this could be core for some), field operations, HR, finance, and other functions through a more diverse sourcing strategy that might include new industry relationships, shared services, outsourcing, or outright divestiture. For example, adopting capabilities and processes from other industries such as banking and telecommunications has allowed some leading energy providers to drive electronic and self-service adoption rates that are nearly double the industry average. Ultimately, success for any utility is all about establishing leading capabilities, and, in some sense, all utilities will have to find and grow their core to also find their future.

A utility pursuing the second strategy, “smart energy,” can meet the future here and now, making selective investments inside

Fig. 5

FUTURE UTILITY OPERATING MODELS



regulated and deregulated markets, as it slowly becomes an energy service provider by embracing the drive toward renewables and retail-ization of the home. This option calls for a strong move into deregulated markets where opportunities and challenges broaden. In this scenario, power providers get involved in the entire renewables value chain, from solar power (utility scale and distributed), to electric vehicles, smart meters, and beyond-the-meter solutions including financing, installation, and servicing energy infrastructure.

This path requires that utilities have a strong understanding of new technologies and their first and second-order effects on their business model, existing asset base, and end consumers. The question is, what technologies are ready today—or nearly ready—and how should a utility chart a path toward them? CEOs could benefit by taking a venture-framework approach toward these opportunities to target selective growth opportunities and investments beyond their core regulated business.

For some, this could mean piloting a technology with a teaming partner. For others, it could mean investing in a technology or a target company to gain practical, hands-on experience while also building a future option for additional, non-traditional growth. Still others might make targeted acquisitions to gain access to unique assets and capabilities. Ultimately, they should invest and grow where they can create meaningful value, whether that's owning a critical part of the EV charging infrastructure (e.g., in California) or launching targeted smart energy-related solutions for small and medium commercial and residential consumers. Utilities must not

only assess their growth options, but also measure the effect of building any new capabilities on their existing business.

While the third strategy, "reinvention," is similar to the smart-energy approach in some ways, this model calls for much more out-of-the-box thinking and a deeper risk-reward mentality. For some, a light approach to re-invention could

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mean changing focus within the utility business, while in more drastic cases it might mean actually going outside the fundamental business of delivering commodity resources. For example, in the first case, some utilities might decide that there's less of a future in electricity alone, so they might move into multiple

commodities like gas and water. In the latter case, change could mean a wholesale shift to a new source of EBITDA where in 15 to 20 years the utility is selling—and delivering meaningful value from—data analytics for the digitally unified home of the future, home maintenance, insurance, or financial services.

While this has been the least likely path for utilities in the past, new players moving into the market will force change—manufacturers, home services companies, big-box retailers, clean-tech innovators for distributed energy solutions ... the list goes on. In fact, utilities might prosper through entirely new types of relationships with other market stakeholders. For

example, a UK electricity and gas company struck a deal with a leading UK retailer to develop happier and stickier customers for a new line of energy-related products and customer loyalty rewards. Thus, this approach might also require that utilities develop core competencies in alliance management and partnering skills—distinguished from the skills of a vendor or service provider.

For most, reinventing the utility won't come easy. Most utilities today invest less than 0.5 percent of revenues on R&D; compare that to 8 to 12 percent of net sales for an electronics or pharmaceuticals firm. This option forces a utility to assess its core competencies and potential competitive advantage, and then drive toward that with all available resources, capital, talent, channels and partnerships, marketing, etc. The unique and universal connection that utilities have to customers' homes and businesses presents such opportunities, though capitalizing on these might require a change in the regulatory compact.

The fourth strategy, "growth," involves mergers and acquisitions (M&A) to help utilities manage costs while expanding into new markets and services. Though some companies might miss (or decline) the M&A market opportunity by looking inward during economic downturn, the general M&A trend among U.S. utilities will continue; as of 2012, the number of shareholder-owned electric utilities in the U.S. had declined by 48 percent since 1995.⁹ However, large-scale M&A is becoming more difficult as a result of market power concerns, and so, in addition to whole-company transactions, there's currently a focus on asset transactions.

Consolidation can provide a mechanism to reset financials and drive earnings growth through economies of scale, and corporate functions can offer some of the highest post-M&A synergies, not only to reduce costs but to transform how companies compete as well.¹⁰ Diversification might also come from scale, as utilities could build broader and deeper portfolios across markets to leverage knowledge and talent through shared resources.

The rise and requirement for renewables could present new M&A targets that give current industry players opportunities to maintain or achieve new market leadership roles. Incumbent leaders bring customers, scale, and capital (for R&D) to clean-tech targets that will, in turn, help them become the next generation clean energy majors.¹¹

As a note of caution, many utilities have destroyed value through M&A, as some utilities have failed to exploit all of their targeted post-M&A benefits in the form of improved efficiency

(lower cost) and increased business and market effectiveness (greater competitiveness). Accordingly, plotting a clear path to extract value is critical, and top-performing, lower-cost utilities are on average much better at extracting value from M&A.

CEOs could also help maintain and grow the value of acquired assets through advanced portfolio management processes that rely on competencies such as real option planning, network modeling, and a strong understanding of market prices. Additionally, successful asset acquisitions require careful market timing. For example, many utilities lost out when they bought high and sold low to shore up extended balance sheets, especially with wholesale assets.

Picking the Right Approaches

Utility CEOs must lead the energy revolution, or they might find a future dictated by others—policymakers, non-traditional suppliers, and consumers. With so much complexity and uncertainty, the answer for any given utility will vary, and moving forward is about getting the strategic imperatives right for the company, achieving operational excellence, and then ensuring the proper functional support to enable the chosen market approach.

The role of the regulator isn't to save the legacy business but to support end consumers.

To get there, many utilities will need to re-think their business model. Again, multiple scenarios are possible. Sustained low prices for natural gas could force major resourcing and operational shifts. Predominantly electric utilities could enter the gas pipeline market to hedge their portfolios. Retail-ization might present opportunities for unique relationships with other retailers, potentially leading to new lines of business and revenues. Some utilities might restructure their portfolios and financing structures by unbundling their transmission assets into REIT-type structures. Continued cost-cutting and creative sourcing might help utilities to find the loose change sitting inside their own four walls, which, in some cases, can add up to significant value (*i.e.*, enough to affect EPS).

Leaders have an opportunity to determine where, across the spectrum of options, to place bets going forward, as well as where and how those bets could change over time. It's a balancing act, and utilities will have to push limits and exploit various resources and channels that drive their business—for example, how to get the most out of (and working with) regulators, customers, assets, new fuels, new technologies, and evolving profit and loss and balance sheets. It will be a risky voyage for all and a rewarding one for some. ■

9. "Capitalizing on Consolidation," *Public Utilities Fortnightly*, Oct. 29, 2012.

10. *Ibid.*

11. Analysis from Accenture and Agici on growth through acquisition, 2011.

