3 THE NEW MAKE VS. BUY CALCULUS

How utilities can remain relevant to customers who produce their own power

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The days of the traditional electrical power utility are numbered. Disruptive forces – a combination of supportive government subsidies and advances in technologies such as small-scale combined heat and power boilers, solar photovoltaics, and battery storage – are making it relatively easy and cost-effective for people in developed countries to unplug from the grid. Yes, fossil fuel prices have fallen, but photovoltaic and battery storage prices are also dropping quickly.

As a result, residences and small businesses are rapidly becoming more energy independent, producing electric utilities' core product – electricity. We estimate that a home or business goes solar in Europe and North America every two minutes.

If current trends hold, our research shows, the amount of power generated by utilities' residential and commercial customers in Europe and North America will rise by about 50 percent within the next five years, reaching a record amount of approximately 400 terawatt hours per year. That's the equivalent of $20 billion in annual revenues that could shift away from utilities. By 2050, that amount will reach nearly $50 billion, provided energy prices stay close to their present level, supportive regulations remain in place, and low-cost technologies become even more commonplace.

Electric utilities need not accept this fate. Other industries have experienced similar levels of disruption and have emerged stronger for it. Consider the telecommunications industry in the 1990s. When deregulation fundamentally reshaped the market, smart competitors refocused their attention on anticipating and meeting their customers' preferences – by pioneering a wide range of alternative products and services. Most now provide not just basic land line phone service but also Internet, cable, and applications that enable phones to communicate with, and remotely manage, everything from home security systems to car temperatures to bill payments.

To come out on top of this disruptive wave, utilities, too, will need to better anticipate and meet their customers' needs – even if that means helping them become their competition. Specifically, utilities are best positioned to understand the economics of power generation. Instead of just trying to sell their power, they should sell their knowledge, by advising a broad range of customers on whether they should invest in making their own electricity. More and more customers, ranging from businesses to households, turn to a variety of sources for energy to ensure that their power is secure, abundant, hassle-free, cheap, and sustainable. But they need technical expertise and practical support – the core competencies of utilities.

In addition, like telecoms, utilities will have to streamline and automate their legacy operations while investing in developing their people. Employees will need to be capable of articulating and delivering a much more expansive range of new products and services than is currently offered.

Finally, the electric utility of the future will have to be at the forefront of incubating, developing, investing in, and implementing new energy-related technologies. To do so, utilities will need to cooperate effectively with a much broader network of investors, researchers, government policy makers, and development programs.

It's tempting for utilities to think customers' fledgling efforts to produce their own electricity are temporary. They're not. They portend a new, more diversified wave of electrification that will alter our way of life. Unless utilities become more attuned to customers' needs – and start acting as both expert providers and advisors – they'll be dropped from their old customers' new electric equation.

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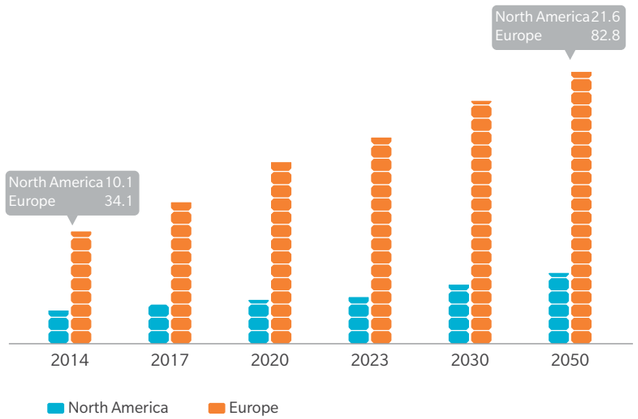
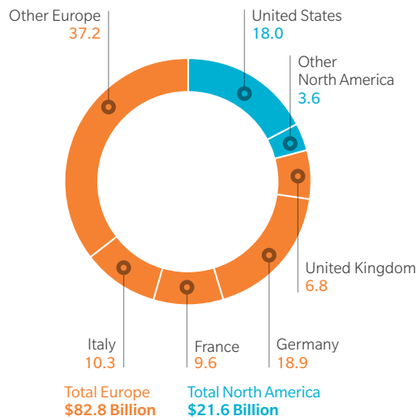
http://www.oliverwyman.com/insights/publications/2015/jun/make-versus-buy-calculus.html

THE NEW BALANCE OF POWER ($ BILLION)
RESIDENCES AND SMALL BUSINESSES ARE BECOMING MORE ENERGY INDEPENDENT

Residential power generation forecasts



Prospective customer market size in 2050



Source: Oliver Wyman analysis.