



SMART UTILITIES SHOULD DISCOVER SMART HOMES

Offering smart-home services can be a road to new profits

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Digital disruptors have rewritten the rules for a broad swath of industries, from transportation to hospitality. Now, it's energy's turn, as utilities struggle with falling demand and lower prices – as well as a push on the part of regulators for new, innovative ideas, such as smart grids, energy efficiency, and home energy production. In Europe and North America, utilities have been cutting costs to maintain profit margins, but there's only so far cost-cutting can go.

To date, tactics to boost utilities' fortunes have included selling home appliances for lighting and temperature control. British Gas was a first mover in this business, launching a separate unit in 2007 and acquiring companies with expertise in solar cells, smart meters, and heat pumps. But most utilities have limited competitive advantage over traditional retailers and digital players in this area. If they cannot ensure product quality and maintenance, the new business could damage their reputation and increase operating costs.

A better move is to branch out into "smart-home" services. Customers are increasingly interested in this kind of proposition, which can include energy management, home security, and entertainment, an Oliver Wyman survey shows. Bundled energy solutions – such as a domestic heating package, intelligent tariffs, and energy consultation – all influence more than 30 percent of respondents in their choice of utility, according to the survey, which was conducted in Germany. (See "Utility Customers Want Innovation" on page 16.) In 2015, the smart-home business sector had a value of \$47 billion globally, and it is expected to grow at 14 percent a year between 2016 and 2022. But utilities need to move fast. New entrants, especially global tech players, are moving into the business with packages that leverage their digital technology.

14%

How much the smart-home business is expected to grow annually

Smart-home services start by helping customers heat and cool their buildings for maximum comfort at minimum cost. Instead of paying for energy use, for example, the customer might pay a monthly flat fee to maintain their home at a constant temperature of 23 degrees Celsius. Southern California Edison (SCE) uses smart thermostats and bill estimation services to help customers use energy more efficiently. SCE even offers \$200 rebates to customers that let it shut down their air conditioning during peak demand periods.

THE SEARCH FOR NEW VALUE

Smartphones and apps are opening the way to an intriguing range of new services. Enel in Italy has launched a product that lets customers know in real time which rooms at home are consuming more energy and which less. The customer can then remotely enable or disable devices connected to smart sockets. The app communicates with motion sensors – in rooms and at doors and windows – that allow people to see what's going on while they are away: whether their children are sleeping, for example. In some cities, the app can also

EXHIBIT 1: THE NEW SMART-HOME DEVICE BUSINESS MODEL FOR UTILITIES

Some utilities in the US are working with global players to expand their reach into smart-home services

SMART-HOME SERVICES IN THE US MARKET

TELECOM

Comcast Xfinity



- Smart-home services bundled with TV and internet services
- Home security and control devices include central controller, sensor system, cameras, lighting controllers, and thermostats
- \$100-400 installation cost, \$20-50 per month, 24-36 month contract

TECH/SW

Nest, Google



- NEST learning thermostat is able to program itself to monitor home energy usage
- \$250 up-front cost, installation included via some retailers
- GE offers home health monitoring via GE QuietCare
- Infra-red sensors track activity for caregivers

SECURITY

ADT Pulse



- Combines home automation, thermostat and light control, and video surveillance installations, with access to online portal/mobile app
- \$100 installation cost, 36-month contract

RETAILERS

Iris from Lowes



- Smart-home automation kit, which combines home monitoring and energy saving capabilities
- \$180-300 set-up cost, \$0-10 per month, DIY installation and no contract required

UTILITIES

SDGE, Southern California Edison



- Energy efficiency and demand response programs are the focal point of utility-offered smart-home energy management services
 - Home energy adviser
 - Remotely monitor consumption
 - Control heating via mobile
 - Efficiency consulting and education program

Type of service provided



Source: Oliver Wyman analysis

order food, as well as providing travel and weather updates.

This array of services also points to a wider range of competitors, who can combine energy services with extras from their own special capabilities. Intel’s Care Innovations unit offers home health monitoring, based on infra-red sensors that track a resident’s movements. Home security company ADT Pulse adds in video and sensor surveillance, which can be monitored online and on a smartphone, and can generate alerts for authorized access (children returning from school) or non-authorized (burglars). Comcast’s Xfinity brand includes TV and internet service in a bundle. (See Exhibit 1.)

MAINTAIN CONTROL

Energy utilities have an advantage over newcomers through their connections to people’s homes and the vast quantities of data they collect on consumer power use. But to offer attractive packages, they will need to team up with firms that provide complementary skillsets, such as telecoms, automated building firms, software designers, and data analytics providers. When they do this, utilities must take care to retain control over the new offerings, by acting as the main orchestrators and first movers. They should offer end-to-end integrated services and examine carefully the customer experience at steps, from product choice, to aftersales.

If utilities don't move quickly, they could lose their relationships with customers, as other players seize the initiative and aggregate various single services into packages.

Preliminary market analyses indicate that smart-home services could increase utilities' operating margins substantially, anywhere from 11 percent to 18 percent. At the same time, customer attrition could fall between 3 to 5 percent. We do not expect a major transformation, but rather incremental changes driven by pilot projects starting in the coming months.

To set the process in motion, utilities should consider creating dedicated units to design and test out new solutions, or try open innovation models. Medium-sized utilities could combine resources if they don't have the scale to compete with tech giants or larger rivals. One thing is certain: Disruption is coming, and utilities need to act. They are about to find that conducting normal business consists of constant innovation.

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