



GET CREATIVE ABOUT FLEXIBILITY

Utilities can no longer afford to
take a wait-and-see attitude

Andrew Perry

The evolution of the United Kingdom's energy system into an innovation-led, decentralized market presents a fundamental challenge to the traditional low-risk, cost-focused approach long favored by established incumbent utilities.

New smart technologies, creative business models, and a gradual updating of the regulatory framework are driving this change. These same forces, however, are also creating a set of strategic complexities, risks, and opportunities for utilities, as well as ushering in a new group of agile startup competitors that are trying to harness these elements to disrupt the utilities market.

The speed and efficiency with which incumbent utilities respond to these challenges may well determine whether they continue to play a leading role in the UK energy market in the long term or cede their position to new market players. And nowhere are these changes more evident than in the area of flexibility.

Flexibility, as broadly defined, involves the management of the generation or consumption of power to ensure system balance. Previously, this balancing act was managed almost exclusively via flexible fossil-fuel generation. But renewable intermittency and nuclear inflexibility pose new challenges to flexibility.

In parallel, technology development is opening up opportunities to shift demand so as to match generation and make use of battery storage.

INNOVATION GOES MAINSTREAM

Technology-led commercial innovation is already making its mark on the energy system. Battery storage technology began to come of age as a mainstream system tool in the UK when 1.2 gigawatts of capacity was bid into the

enhanced frequency response (EFR) auction in August 2016; and later in December, another 500 megawatts of new-built battery storage projects were awarded 15-year contracts at the capacity market auction.

Companies like Stem in the US and Sonnenbatterie (in partnership with Lichtblick) in Germany are developing creative commercial approaches that enable the full value from storage to be captured and the barriers associated with the up-front capital costs to be mitigated. Other projects, like Open Utility's Piclo marketplace in the UK (in partnership with Good Energy) and MVV's "Strombank" in Germany, are exploring how peer-to-peer trading and local marketplaces that manage the allocation of demand and generation can become a reality.

With so many companies already in the market, and with many more sure to join, the commercial mettle is being grasped quickly. For example, with the removal of barriers to elective half-hourly settlement due in the early part of this year, Green Energy UK is already offering a business-as-usual, time-of-use tariff for domestic customers.

Energy regulator Ofgem has begun to consider the regulatory implications of such innovations, recently issuing a call for evidence on a smart and flexible energy system. This opens the door to potentially significant changes in the rules, such as providing greater clarity on how storage is treated from a connection and charging perspective and introducing mandatory half-hourly settlement for all domestic and business customers. Should these changes come about, they could increase the commercial rewards derived from flexibility and help accelerate innovation.

EXHIBIT 1: NEW BUSINESS MODELS FOR UTILITIES

Flexibility is a core aspect of new product and service categories



BUNDLING SERVICES

Offer a combination of services at a lower rate than what they would cost individually



TIME-OF-USE OPTIMIZATION

Use demand shifting, storage, and distributed generation to shift usage from peak to off-peak times



EFFICIENT CONSUMPTION

Use data to improve the efficiency of customer consumption; provide value by driving cost savings and reduced usage



LIFESTYLE PRODUCTS

Offer products that improve customer experience; such products provide a rich trove of customer data



ENERGY AS A SERVICE

Offer the product as an ongoing service rather than a purchase, cutting up-front costs but growing revenue stream



MARKETPLACE OPERATION

Develop a platform for trading distributed resources; value comes from a service fee

Source: Oliver Wyman analysis

BE BOLD

Flexible use of storage and demand response is fast becoming an integral part of the energy system. Utilities can no longer afford to adopt a wait-and-see policy. They need to focus on developing actionable commercial propositions that use flexibility-related products and services.

There is no playbook for these new business models. They are forming dynamically by way of commercial trial and error in the market. In an increasingly competitive environment, utilities must act with a boldness and creativity that pushes market boundaries. (See Exhibit 1.)

The market for offering flexibility services to relatively sophisticated large industrial and commercial customers is crowded, and margins are tight. A bigger opportunity may center on smaller commercial and domestic users. To take advantage of this, utilities should regard their regulatory obligations, such as the domestic smart meter rollout and mandatory half-hourly settlement of profile classes 5-8, as commercial opportunities. If they do not, others will jump ahead.

Success will call for a commitment on the part of the organization and a focus on a new way of doing things and for allowing new propositions to develop – and fail – quickly. This can be difficult for large incumbent utilities because of their traditional business models and cultural barriers to fast-paced commercial innovation.

CREATE AN INNOVATION ENVIRONMENT

To overcome these types of challenges, utilities must give thought to creating an environment that lets fresh ideas and new cultural approaches flourish, while maintaining a commercial focus.

Acquisition is not necessarily the answer. Many startups lose their way post-acquisition as they are shoehorned into a corporate framework that does not fit them. Moreover, this problem is compounded by the fact that many of the startups that are open to being acquired are often amenable because they find themselves in a position where they have taken their concept as far as it can go.

To mitigate these issues, utilities should consider making strategic investments in smaller businesses while setting out a clear view of how the utility can offer a comparative advantage to assist in the startup's growth and development.

Alternatively, to develop capabilities organically, utilities should avoid simply setting up another vertical business unit within the organization. To create a fresh culture, the utility should consider establishing a startup under the corporate umbrella. The business should be allowed to hire new people and may benefit from being based in a different location.

The changes transforming the UK energy system are creating new strategic and commercial opportunities for utilities. To be sure, there are no guarantees for success. But the rewards that await those who act quickly and decisively could be great, while the risks and penalties for those utilities that wait and do nothing will likely be much greater.

Changes transforming the UK energy system are creating a wealth of strategic and commercial opportunities for utilities

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