

COMMERCIAL FEATURE

ENERGY MANAGEMENT IN A SMART WORLD

Distributed energy and technology-led innovation are changing the shape of the energy industry, as consumers around the world demand more from their usage



The face of energy is changing. An explosion of ground-breaking developments in technology is changing the way consumers approach their energy consumption. Long gone is the ‘passive consumer’ of yesterday, today’s consumer is demanding choice, control and the option to use less energy.

A heady combination of changing customer attitudes, smart technologies and the growth of renewables is creating a fundamental shift in the market and opening up new opportunities for energy suppliers.

Speaking at the 2016 World Summit on Innovation and Entrepreneurship in New York, Jorge Pikunic, managing director of Centrica’s global Distributed Energy & Power business, said: “We’re at the forefront of a new energy world with intelligent appliances, demand-side response and smarter grids that mean customers now have much greater ability to control how much energy they use and when they use it.”

It is a trend which Centrica is seeking to embrace. In 2015, the company established the Distributed Energy & Power business with the aim of helping large users take control of their energy usage.



Large energy users can take a more proactive approach to their energy use

“We want to help customers to turn their energy into an opportunity, whether that be to reduce costs, improve their site resilience or reduce their carbon emissions. What this means in practice is that large energy users such as hospitals or manufacturers can take a more proactive approach to their energy use and make it work harder for them,” says Pikunic.

For Pikunic, the rapid advancements in technology are proving vital in unlocking sustainability, cost efficiencies and reliability for large energy users and businesses.

Innovation is key; and in a world where consumers have come to expect a personalised service, it is inevitable that they don’t just want value for money, but desire their supply and services to be uniquely tailored to their needs and nuances.



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Wrexham Council’s solar farm, designed by Centrica to generate enough power for 700 homes a year

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Jorge Pikunic speaking at the World Summit on Innovation and Entrepreneurship last month

Gaining visibility into real-time electricity usage is the first step in the distributed energy journey. Centrica’s customers can achieve this through its pioneering Panoramic Power solution, which combines wireless sensor technology and cloud-based analytics to provide valuable insights and statistical analysis on their energy usage.

Having access to complete data, right down to the individual pieces of equipment, allows customers to identify maintenance, operations and energy opportunities right across their business footprint.

“If you can’t measure it, then you can’t manage it. Big data and analytics give suppliers the ability to extract meaningful insights for their customers that can lead to beneficial changes to their behaviour.

“For many customers, the first action following that insight is the installation of new energy efficiency measures,” explains Pikunic.

But it doesn’t stop there. The advent of digitisation can also bring opportunities for businesses to harness the flexibility of their assets, using demand side response to access new revenue streams.

It is an approach that Pikunic likens to a shared economy; in the future individuals could opt to reduce their energy consumption for short periods of time. The effect of collective action can have the same impact as a large power station switching on, only more sustainably and potentially cheaper.

It is not only the amount of energy consumed that is fast changing in today’s world, but the location of energy. Increasingly, energy will be generated closer to the point of consumption and the industry is responding to the emergence of local energy systems and micro-grids.

A recent study by WEF showed that 58% of the 687 US organisations surveyed planned to have at least one facility operate off the grid within the next 10 years.

Centrica is working with its customers to provide a package of solutions to both enhance and upgrade their energy assets, including the use of energy storage and onsite generation such as combined heat and power (CHP) and renewable technologies.

With businesses responsible for nearly half of UK emissions, the opportunity for large energy users to contribute to decarbonisation is a factor that can’t be ignored.

Distributed energy also has the potential to accelerate access to energy for millions of people worldwide. In 2013 it was estimated that a staggering 17% of the global population did not have access to electricity, but distributed energy offers the opportunity to leapfrog the cost of central generation and grid systems to create greater availability. A central power station and grid system would take years to build; in contrast a solar farm would take just days or weeks.

Pikunic concludes: “What we are witnessing is the democratisation of energy, from a handful of players to tens of thousands of large energy users and millions of households and small companies that will play a vital role in tomorrow’s energy market.”

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