

Post

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Smart way to smart energy

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Telefónica has been heavily involved in the UK's Smart Meter Implementation Programme - the world's most ambitious Smart Metering project. Emilio Martínez de la Fuente, Head of Smart Metering at [Telefónica Digital](#), gives an inside look; outlining the opportunities, challenges and lessons that every government and utility company should be aware of.

The world is facing a series of burning energy challenges. Global energy demand continues to grow, prices are fluctuating upwards and governments are facing pressure to reduce their carbon emissions. While much energy infrastructure needs modernising to deal with new forms of energy production, such as intermittent renewables, and new energy demands, such as electric cars. There is the need to develop a dynamic grid.

The UK is the perfect example of a country facing this perfect energy storm. The UK Government has however faced up to the challenges and is currently in the middle of the world's most ambitious smart metering project. Smart meters are the essential foundation to the UK's smarter energy future and so the £11 billion [Smart Meter Implementation Programme](#) is its biggest energy infrastructure project since North Sea gas.

The programme, which will see 53 million electricity and gas smart meters installed across the country by 2020, is expected to deliver a net benefit to the UK of £6.7 billion through reduced energy consumption and more efficient management and deployment of energy across the country. It's estimated that a smart meter enabled industry could save two billion tonnes of CO2 a year in 2020 (Smart 2020: enabling the low carbon economy in the information age).

The sheer scale of the energy challenges facing the world need big thinking and solutions; projects like the Smart Meter Implementation Programme are needed. Telefónica has been deeply involved in the project, being awarded the €1.78bn contract to deliver smart meter communications services, so I wanted outline the key issues and provide the inside insight into the project.



Future proofing smart energy

Smart energy networks and the associated device ecosystems that are built today need to be able to handle the demands of tomorrow. Modern energy systems built on top of smart meters offer enormous opportunities to nurture smart grid, smart home and e-health solutions, all currently in their infancy. As a result of these new solutions, there's a need to scale effortlessly to cope with new and unpredictable innovations in services and products, and thus data traffic.

Cellular is a technology that has proved that can scale economically future-proof smart energy systems. It's secure, open and interoperable, and cellular's clear roadmap and continued development will support the Smart Metering deployments as the technology continues to evolve to focus on high-speed capabilities and rich data services.

Rolling out smart meters to every home in the UK is not just about the benefits today, but about building scalable, flexible and future ready infrastructure to act as a foundation for the smart home and smart city visions of tomorrow.

Without consumer understanding, smart energy will fail

Smart meters will provide consumers with more visibility and control over their energy usage leading to cost saving, accurate bills, and access to potential flexible tariffs and services. This should lead to a change in consumer behaviour towards energy consumption. Just like seeing fuel consumption on the dashboard changes how people drives, so this will change the consumer behaviours towards energy consumption.

However, without consumer understanding and buy-in, smart meter roll-outs may not be successful.

In Victoria, Australia, and California, US, smart meter roll-outs had to be stopped due to consumer backlash following insufficient engagement. Numerous UK and global research reports also show that without strong consumer engagement, smart meter programs will fail. Telefónica recently [commissioned a report](#) to look at these consumer issues. The research found that there is currently a low level of consumer awareness with 63 percent of those surveyed not knowing what a smart meter is. Although when the concept was explained, respondents cited greater visibility (77 percent) and an end to estimated bills (73 percent) as the top two reasons in favour of a smart meter.

We need long term and continual engagement with consumer groups to outline the future of the smart home and smart cities in terms which resonate with households across the country.

Trust and security

Consumers and their confidence in smart metering programmes will be an important factor in determining whether the smart energy revolution succeeds or fails. The network and devices must be robust and secure against threats and protect the privacy and integrity of consumer data. While an open dialogue and transparency is needed with consumers to overcome scepticism and concern around the privacy of data.



Engagement with consumers and consumer groups is also needed to overcome concerns around installers and to encourage them to sign up for smart meter roll-outs – this is especially essential for the elderly, disabled people and other vulnerable people. These installers must be well-trained, well-supported and accredited by trusted parties.

Consumers need to understand the enabling power of Smart Metering and the vision of its benefits.

The smart future

Smart meters are the essential foundation for a smarter energy future. They can create important social and economic benefits; reduce energy consumption; lower carbon output; and power smart energy and smart home transformations.

Investing in Smart Meter infrastructure is a progressive and positive move towards securing the world's digital energy future. A properly designed network should be the catalyst to nurture an ecosystem of innovation in digital energy which will propel countries and economies to a more sustainable energy mix. That's why any system must be interoperable, and be able to scale and support future innovation.



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