

Ofgem chief executive, Dermot Nolan, spoke at the Westminster Energy, Environment & Transport Forum Keynote Seminar: *Priorities for the UK energy market: competition, infrastructure and innovation* on 26th April 2018 in London.

Imagine a world where people can buy and sell locally produced green energy directly to each other.

Where they can cut out the middleman, the supplier, and bypass the transmission system.

A digitalised energy world where real-time energy consumption data from smart meters directs electricity to the homes where demand is highest.

This world has arrived. Or more precisely, it arrived – fleetingly - on a small housing estate in East London one Wednesday afternoon earlier this month.

On April 11, a smart energy start up called Verv announced a major milestone using new blockchain technology – a big step forward for UK energy trading.

Residents of a housing estate there sent 1kw of excess solar energy generated from roof top panels to a neighbour based on the energy demand profile of their homes.

Ofgem has shortlisted the trial to participate in our Regulatory Sandbox, which provides a “safe space” for innovators to try out new ideas.

This is the kind of future we’re working towards.

Where new technologies deliver savings and new services to consumers.

Where new entrants with new business models disrupt the old order, forcing incumbents to innovate to survive.

Where genuine competition means that the large suppliers can no longer profiteer from their disengaged customers and where everyone gets a better deal.

But it’s going to take time to get there, and what happens on the way is hugely important.

And I know talk of this future isn’t much comfort to over half the population who remain on poor value energy deals today.

I want to turn to the steps we’re taking now to create a fairer, more competitive energy market.

Ofgem has already put in place measures to protect people from being overcharged.

In February, we extended the safeguard tariff, which covers the 4 million households on prepayment meters, to 1 million vulnerable customers.

As you all know, we are going further, and will put in place a temporary price cap for all those who are on poor value default deals.

The Government's price cap bill is working its way through Parliament and is expected to get royal assent this summer.

Once this happens, Ofgem will implement the price cap by the end of this year.

We're not waiting for Parliament to give the green light – we've already begun to lay the ground work, and people in Ofgem have been working hard to achieve this.

In the last six weeks we've published five working papers on different options for the design of the cap.

Following royal assent, we will publish our statutory consultation this summer which will set out our recommended methodology for the wider price cap.

We remain committed to delivering it as quickly and effectively as possible.

And to fulfilling Parliament's objectives – two of which are that the price cap should protect consumers from being overcharged, at the same time as allowing for competition.

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Turning to the steps we're taking in the near future, this draft legislation states that the price cap will be temporary, lasting no later than 2023.

And that it can be lifted sooner, if the conditions for effective competition exist.

When the cap is lifted, we musn't – we can't – go back to today's energy market.

We can't go back to an energy market that lags behind other consumer markets like telecoms.

We can't go back to a market that relies on outdated technologies. That erects barriers to competition and innovation.

And we can't go back to a market where it's in many suppliers' interests to keep their customers captive and disengaged.

The price cap is a temporary intervention to protect consumers while the regulator, working with the industry and government and all stakeholders, makes the journey to a new energy system that works for all consumers.

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Data – in particular who owns and controls it - is key to creating a fairer, more competitive energy market.

In the analogue world which sold units of energy, data didn't play much of a role.

Suppliers broadly knew that some customers switch and some don't, and they could potentially overcharge customers who do not switch and get away with it.

What other data did they need?

And all the while these customers were kept in the dark.

For those who did engage in the market – an increasingly large section - too often poor quality data meant that the switch went wrong.

As systems are upgraded and smart meters are rolled out, suppliers, for the first time, will have accurate, real time data about how much energy their customers use, how and when.

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But how do we make sure that we don't just end up with a smarter version of today's system, which still enables suppliers to potentially keep customers captive?

How do we make sure that "big data" instead empowers and connects consumers to the digitalised energy system?

Ofgem's database of all customers who have been on poor value default deals for more than three years is a crucial step towards this.

The database will end the supplier monopoly on data relating to these most poorly served customers.

We are requiring suppliers to hand over this data and have been testing the best way to use the database to help these customers get a better deal.

The next step is making it easier for consumers to access their own data to compare prices and switch.

And, with consumers' consent, to allow trusted third parties, such as price comparison websites and app-based switching services, to do so on their behalf.

To do this, we are working with the Government to standardise, simplify and speed up access to and sharing of the data that suppliers must hold on their customers, such as their postcode, current tariff and annual consumption.

This is a very powerful future for consumers, one in which they could benefit greatly.

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Looking further into the future, electric vehicles, combined with intelligent charging, will become another important pillar of this new energy system and change how their owners interact with it.

They can act as a large reservoir of flexible demand, reducing the need to build expensive new grid and generation capacity.

Electric vehicles can do this by flowing electricity onto the system when demand is high and power up when supply is plentiful, or their owners need it.

We are already seeing extensive trials in such vehicle to grid technology and expect that bundled packages which combine energy and charging services will become commonplace.

Again, this is a very powerful future for consumers, who will see the financial benefits of smarter grid use flow back to them. We're committed to setting the framework for this future.

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The use of personal data is a hugely sensitive issue, particularly following the recent events at Facebook and Cambridge Analytica.

Ofgem is working with the Government to ensure consumers' personal data is properly protected and works for them, not against them.

New regulations, such as General Data Protection Regulation, are being brought in to strengthen safeguards for consumers over how companies and organisations use their data.

Ofgem is also being given new powers to respond to the fast-evolving threat of cyber security.

This is a hugely important issue. I firmly believe that the use of personal energy data, with the right safeguards and protections in place, is in consumers' interests.

Data enables good value time of use tariffs or intelligent charging of electric vehicles, helping to balance the system and reduce bills for consumers.

If consumers give their consent, trusted third parties can access their personal energy data to offer them a better deal as well as tailored goods and services.

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As we seek to move to this new energy future as quickly as possible and at the lowest cost, Ofgem is reviewing whether the current market arrangements are a help or a hindrance.

Under the "supplier hub" model in place since privatisation, suppliers act as the primary conduit between customers and the wider energy system.

But we're concerned it could stymie new digital technologies and business models coming to the fore.

For example, under the current model only licenced suppliers are allowed to supply customers.

This means that innovative ways of supplying energy – such as the peer to peer trading model demonstrated in East London - may struggle to get off the ground.

Last November we issued a call for evidence asking for views about the supplier hub model. Based on feedback and our initial scoping work, we believe the need for some form of change is clear and we will say more about this later this year.

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Amidst the huge change, what will remain constant is Ofgem's commitment to fairness.

Whatever the savings, products and services on offer, and however easy it becomes to engage in the market, there will always be those who can't or won't.

We will make sure the vulnerable are protected, in line with our statutory duty, as we have already demonstrated by extending the safeguard tariff to vulnerable customers.

The issue of fairness is also guiding our reforms to the regulations underpinning the energy system, such as how the costs of and access to the network are shared.

More households and businesses are generating their own electricity on site, which I applaud, for example using roof-mounted solar panels.

In doing so they avoid paying for the fixed cost of running the network, even though they still draw electricity from the grid when they need it.

It may not be fair that those who rely on the grid all the time, including vulnerable households, shoulder a growing share of these network costs.

To make it harder for "off grid" consumers to avoid paying their fair share, and I am not criticising anyone for that, we have proposed that these charges should either be fixed, or based on a customer's capacity needs rather than their consumption.

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Network capacity also needs to be allocated fairly to households when new technologies such as electric vehicles, or heat pumps, start placing significant demands on the system.

I applaud the use of electric vehicles. However, without reforming the regulations, people who don't use electric vehicles or batteries could end up footing the bill to provide this extra capacity.

We will set out our next steps on access this summer, and for network charging this autumn.

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We need to move to this innovative future, but we must make sure that

- the benefits aren't only felt by those who can afford to install solar panels or buy an electric car.
- the costs aren't disproportionately met by the less affluent
- some of the most vulnerable in society aren't left behind.

This means striking a delicate balance between building innovation, whilst protecting all consumers and making sure everyone benefits.

We cannot end up with an energy system which is smarter but divides consumers into winners and losers even more perniciously than today.

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The price cap will provide temporary protection as we make the journey to a new digitalised, data rich energy future.

The journey won't happen overnight. And we will all face obstacles along the way.

For the innovators - to come up with new products and services that benefit consumers.

For the large suppliers – to embrace the future.

There will be twists and turns in the road – some technologies and business models will succeed. Others will fail.

But there can't be any turning back. We must have reached our destination - this digitalised, data rich and fair energy system – by the time the price cap is lifted.

Ofgem is hopeful of going on this journey – we hope you are too.