



3rd Floor North
200 Aldersgate
Street
London EC1A
4HD

Tel: 03000 231 231

citizensadvice.org.uk

14/01/2019

Citizens Advice response to 'Upgrading our energy system. Smart systems and flexibility plan: Progress update'

This submission was prepared by Citizens Advice. Citizens Advice has statutory responsibilities to represent the interests of energy consumers in Great Britain. This document is entirely non-confidential and may be published on your website. If you would like to discuss any matter raised in more detail please do not hesitate to get in contact.

Introduction

This document contains Citizens Advice's response to the Government and Ofgem's *Upgrading our energy system: smart systems and flexibility plan* ('the Plan')¹.

We welcome the opportunity to respond to the Government and Ofgem's update. As the country seeks to meet its emissions targets, this has necessarily led to more intermittent and distributed forms of generation connecting to the grid. With these increases there are new challenges relating to balancing the system.

While new technologies, business models and digitalisation offer real opportunities to meet these challenges, this is not guaranteed. Here a positive consumer experience will be key to ensuring success for consumers. For example, the uptake of new technologies such as smart appliances and EV's will depend on confidence that clear consumer protections and means of redress are in place. Similarly, ensuring that individuals are able to help deliver flexibility either directly or indirectly, for example through time-of-use tariffs, depends on clear understanding of their value and assurance that consumer protections are in place. To ensure that people feel confident of their security in a new market will require that they are offered transparency and control over why their data is being collected and for what purpose.

¹ OFGEM, [Smart Systems and Flexibility Plan: Progress Update](#) (October 2018).

In recent years, we have conducted research and published reports on a range of topics related to smart and flexible energy systems. Last year we also launched an ongoing research programme looking at the future of energy markets and exploring how best they can work for future consumers. Research and reports within and outside of this programme include, “Take Charge: An analysis of the domestic electric vehicle tariff market” (2019)², “Current consumer attitudes towards Smart Home technology”³, “Community Energy: maximising the contribution in a changing energy market” (2018)⁴, “Consumer Expectations of Regulation: Heat Networks” (2018)⁵, “Missed opportunities and failures in the ‘time of use’ tariff market”⁶ (2018), “Early consumer experiences of smart meters” (2018)⁷, “The Value of Time of Use Tariffs in Great Britain” (2017)⁸, and “The Disrupted Decade” (2016)⁹.

As with our response to the original plan¹⁰, our arguments are based on fundamental principles and values, supported by evidence, that we believe should guide the UK’s transition towards a smarter, flexible energy system. Below is a summary of these principles with examples of how we have applied them to different issues covered in our consultation responses:

- **Limiting costs to consumers:** for example when deciding which governance regime to put in place for aggregators;
- **Consumer protection:** to limit the liability of early users of smart tariffs who find they do not work for them;
- **Transparency:** to ensure consumers are clear on who uses the data generated by their smart appliances, when and why;
- **Security:** of consumers’ data and privacy when using smart energy devices, which requires the development of sound, uniform standards across the industry;
- **Information:** which is relevant, understandable, true, accessible, free and complete; as the energy system becomes more complex, as smart tariffs, meters and other appliances fill the market, information will be key;
- **Fairness:** for example when deciding who should pay for the development of smart charging infrastructure for electric vehicles;
- **Cost-reflectivity:** for example in distributed generation support;
- **Vulnerability:** to ensure vulnerable consumers are not adversely affected by products or services which might not be suitable to them, but equally that they do not suffer indirectly because they are not able to access them

² Due to published in January 2019

³ Citizens Advice, [The future of the smart home](#) (September 2018)

⁴ Citizens Advice, [Community Energy: maximising the contribution in a changing energy market](#) (August 2018)

⁵ Citizens Advice, [Consumer Expectations of Regulation: Heat Networks](#) (March 2018)

⁶ Citizens Advice, [False Economy](#) (August 2018)

⁷ Citizens Advice, [Early Consumer Experiences of Smart Meters](#) (July 2018)

⁸ Citizens Advice, [The value of time of use tariffs in Great Britain](#) (July 2017)

⁹ Citizens Advice, [The Disrupted Decade](#)(November 2016)

¹⁰Citizens Advice, [Towards a smart, flexible energy system](#) (January 2017)

Below we comment on the progress made in the following issues covered in the plan:

- Export tariffs
- Half-hourly settlement
- Data
- Smart appliances
- Electric Vehicles
- Demand Aggregators
- Consumer protection
- Consumer education
- Markets which work for flexibility

Q1: “We are seeking the views of energy industry players, including new entrants, and consumer groups on questions around how our energy system could be smarter and more flexible.”

And

Q2: “Are there actions relating to a smart and flexible energy system that you think we should be prioritising, which are not discussed here? Please provide evidence and analysis to support your answer where appropriate.”

Export tariffs

Issues related to export from domestic and micro-business consumers need to be tackled more urgently. This is necessary to ensure that micro-generation is efficiently contributing to the system, and to enable future services that will involve exporting (eg batteries and vehicle-to-grid). We are deeply disappointed that the Feed in Tariff (FiT) export tariff will be withdrawn without an immediate replacement in place. This means some installations are likely to export energy to the grid for free, which could damage consumer confidence to participate in export services in future. It is likely to discourage some households from installing microgeneration until a later date where there is more clarity on remuneration, or dissuade them from installing it at all. It may cause a significant, and avoidable, contraction in the supply chain that could cost jobs and put up the cost of capital. It may also mean that more expensive low carbon alternatives are procured instead, as investment is likely to be redirected to other technologies where returns are more certain.

We have proposed that the government should extend a “subsidy-free” version of the FiT export tariff set at a discount to the wholesale electricity price, as a bridge to a market-based approach for this energy in future. At the time of writing, the Department for Business, Energy and Industrial Strategy (BEIS) had just published its consultation on the Smart Export Guarantee. We will respond to that consultation separately in due

course and the following observations should not be taken to be an exhaustive summation of our views on its proposals. While we warmly welcome the direction of travel towards trying to provide some guarantee that consumers will be paid fairly for their export, we wish to make two early observations. The first is that while the timeline for the introduction of this replacement scheme is unclear¹¹, it appears almost certain that there would be a substantive gap between the closure of the current export FIT and its introduction. That hiatus could deter some households from investing, result in others not being paid for a period, and threaten jobs. We would like to see BEIS find a means to cover that gap. Secondly, repeated industry feedback from both suppliers and solar advocates suggests that there are significant impediments to the settlement of metered domestic export that need to be resolved before suppliers can meaningfully offer domestic export tariffs. For example, problems persist around the creation of new export MPANs when smart meters are installed. There are also issues whereby access to export data through the DCC is currently restricted to the import supplier only. This could have a particularly detrimental effect on the emergence of new commercial models, which will need easy access to export data. We would like to see those issues expeditiously explored and resolved.

Once these issues are resolved, FIT generators should be required to accept a smart meter from their energy supplier to be eligible for this revised, subsidy-free export tariff.¹² Until that time, however, we support the continuation of deemed payments.

In line with the status quo for FIT payments (where there is recourse to the ombudsman - OSE), and the findings of the Each Home Matters review, there needs to be careful consideration of the necessary protections for domestic and micro-business consumers selling their export.

Half-hourly settlement (HHS)

We see Ofgem's market-wide half-hourly settlement reform as a key enabler for more homes and businesses to provide flexibility and use their energy in a smart way, as well as to make the settlement system more cost-efficient. We are however concerned about the delays in elements of the reform. The decision on access to data for HHS was planned for end of 2018, and a consultation on the impact of HHS has been delayed multiple times. Both are vital aspects to make the reform work in the interest of energy consumers. We hope that the reform's overall timeline, to make a decision by the end of 2019, remains unaffected by these delays.

Data

Since the beginning of the rollout, we have argued that if consumers are to actively engage with new innovations in the market, they should be able to understand and

¹¹ If we remain aligned with the new EU Renewable Energy Resources Regulation, this would set a deadline of mid 2021 for consumers to be remunerated at a level that reflects market value, possibly taking into account the long-term value of the exported electricity to the environment and society

¹² Citizens Advice, [Citizens Advice Response to BEIS's Consultation on the Feed-in Tariffs Scheme](#) (September 2018)

control how their data is used. As well as building trust, this approach gives consumers some leverage with energy suppliers and third parties with an interest in collecting and using consumer data.¹³

Last year we published a proof of concept for a smart meter data dashboard. The dashboard is designed to provide clarity over who is accessing your energy usage data and how often.¹⁴

For HHS we think that opt-in is an optimal solution for consumers as it retains consumer control, doesn't change the existing terms and incentives suppliers to make the case to consumers to access more detailed data. We think that Ofgem should conduct further analysis before granting suppliers access to half hourly data before forecasting.¹⁵

Smart appliances

The government recently published the outcome of its recent consultation on standards for smart appliances.¹⁶ We agree with the need to set regulatory principles for companies to adhere to.

It is right that some elements of consumer protection should to be considered more widely than smart appliances. For example, consumer education of smart energy will require a holistic and strategic approach spanning different technologies, services and markets, of which smart appliances is one just one factor. Education should be given in ways that consumers want to receive it and getting the information they need at times most relevant to them. We discuss this in more detail below.

Some elements of consumer protection should be built in by design, such as accessibility, security or privacy. Due consideration should be taken for what other protections may be reasonably built into technologies. For example, other organisations have suggested personalised information disclosures written into the code of algorithms¹⁷.

For consumers to want to engage with demand side response, 'attractive' value needs to be derived from smart appliances and products and support should be given to help a consumer understand appropriate 'pay back' times. We are considering different ways consumers might be given information about the benefits of smart home technology. This research will likely be published in Autumn.

Providing consumers with reassurance on the data collected and why it is being used is an obligation on all companies. However this obligation may be discharged in a range of ways, with varying success. It will be important that government considers what

¹³ Citizens Advice, [Towards a smart, flexible energy system](#) (January 2017)

¹⁴ Citizens Advice, [Building consumer protections into smart homes](#) (September 2018)

¹⁵ Citizens Advice, [Response to Ofgem's consultation on access to half-hourly electricity data for settlement purposes](#) (September 2018)

¹⁶ BEIS, [Government Response to Consultation on Proposals regarding Smart Appliances](#) (October 2018)

¹⁷ Centre on Regulation in Europe, [Towards Smarter Consumer Protection Rules for the Digital Society](#) (October 2017)

mechanisms could be applied across sectors to help consumers. As mentioned previously, last year we published a proof of concept for a smart meter data dashboard¹⁸. Tools like this can offer transparency and control, addressing concerns and improving consumer confidence.

On redress, there should be a seamless journey for consumers, whoever they approach first.¹⁹ The responsibility of who provides support or addresses concerns must be clear, even as technology cuts across different markets. This point has also been highlighted through our work on the government's EV energy taskforce, with stakeholders other than Citizens Advice also expressing concern for this.

Electric Vehicles (EVs)

We agree with Government plans²⁰ to move towards EV chargers that are smart-enabled and prescribe minimum requirements that smart chargers should meet. Smart charging is essential for the integration of EVs into existing electricity networks and offers the opportunity of avoiding disruption and additional costs, which would also be borne by non-EV owners.

Although there seem to be high hopes that EVs will deliver great amounts of flexibility, when looking at it from the driver perspective, we find that we have some way to go to make flexibility easy to deliver for EV drivers. One of the ways through which EV drivers will - and some are already - deliver flexibility is by signing up to a time-of-use tariff and moving their home charging to off-peak periods. In our forthcoming report "Take Charge: An analysis of the domestic electric vehicle tariff market" we find that it is actually very difficult for EV drivers to find the best tariff for them, especially when considering smart time of use tariffs.²¹ We found that simply choosing a tariff marketed as an EV tariff is not necessarily the cheapest option. There is a lack of consumer-friendly information on price-comparison websites²², which often don't even list EV tariffs and all their benefits.

EV owners, and all energy consumers who wish to deliver flexibility for that matter, need to have access to tools that help them model their likely bill on a specific tariff. Such tools should show how a change in energy usage behaviour, e.g. shifting charging to a different time, can help them save money. Otherwise the price signals given through time of use tariffs will not trigger the desired behaviours, meaning energy consumers may end up with higher bills than they anticipated and system benefits don't materialise.²³

¹⁸ Citizens Advice, [The smart meter data dashboard](#) (July 2018)

¹⁹ Citizens Advice, [Building consumer protections into smart homes](#) (September 2018)

²⁰ Department for Transport, Office for Low Emission Vehicles, [Government funded electric car charge points to be smart by July 2019](#) (December 2018)

²¹ Due to be published Jan 2019

²² The role of price comparison sites in informing consumers of the availability of dynamic tariffs, has been recognised in the newly agreed EU electricity Directive. This will require at least one site in each Member State, to provide a full overview of the market, including dynamic tariffs.

²³ Citizens Advice "Take Charge: An analysis of the domestic electric vehicle tariff market" (due to be published in January 2019)

Choosing an energy tariff is just one step on a longer EV driver's journey. We believe that one of the most crucial ingredients to making EV mass uptake a success is to ensure that EV drivers have a good "consumer journey", i.e. that from their initial interest through to purchasing or leasing their EV, changing their tariff, charging their car, and resolving a problem, they feel well-served. Having essential protections and rights when doing smart charging or delivering vehicle to grid services will be key to this journey. We are leading on Topic C of Workstream 2 for the EV Energy Taskforce²⁴, which is highly relevant to preparing the energy system for mass EV uptake and ensuring that EVs can be integrated into the energy system in a smart way.

We greatly welcome the work on a consumer-focused guide for installing EV charge points and smart charging mentioned in the plan. Spread through the right channels, this guide should help with the above-mentioned consumer journey and generate trust and interest in smart charging.

Demand Aggregators

We greatly welcome the creation of a code of conduct for aggregators by the Association for Decentralised Energy (ADE), Flex Assure. Over the next months, we will be monitoring which and how many aggregators will sign up to this voluntary scheme. We believe that codes of conduct and other forms of consumer protection will actually help increase the number of people who deliver flexibility, as it gives assurance and security in a relatively new market which sees energy consumers hand over control over their assets to a third, unknown party.

We note however that Flex Assure only covers business customers. The fact that it covers small businesses is positive. The domestic flexibility market is in its infancy but could grow quickly as electric vehicles on the road are increasing and vehicle-to-grid chargers are becoming affordable. We hope that Flex Assure will expand to cover domestic customers in the future, or that other domestic consumer schemes are set up to avoid detriment.

Consumer protection

Protecting those engaged in smart and flexible services

We recognise that Ofgem and the Government are considering consumer protections in the context of various projects such as the Targeted Charging Review, which is welcome. Apart from that, there seems to have been little progress so far in thinking about how to best protect consumers who engage in delivering flexibility services directly or through a time of use tariff. Since the original plan was published in December 2016, the smart tariff and aggregator market has greatly developed. There are now several smart ToU tariffs on the market, including dynamic pricing. Vehicle-to-grid EV chargers are now available to small businesses as well as domestic customers.

²⁴Low Carbon Vehicle Partnership, [Electric Vehicle Energy Taskforce](#) (2018)

Therefore all of our comments and recommendations²⁵ from the original plan still hold and we consider them more of a priority than ever:

- Provide consumers with tools to enable them to find the right tariff for them. Price Comparison Websites currently do not offer advice nor smarter tools to let consumers assess how much of a shift in energy consumption and behaviour may be required to make the most of a time of use tariff.
- Introduce protection for those adopting time of use tariffs for the first time, for example by offering bill protection for a certain period of time.²⁶
- Consider the particular needs of consumers in vulnerable circumstances and protections they may need. Different vulnerabilities may help or hinder the ability to benefit from time of use tariffs. Development of the tariffs should include explicit protection for vulnerable consumers to ensure they are not worse off than they currently are under flat tariff structures.
- Build into contracts the principles of data control and transparency, and ensure they are GDPR-compliant.
- Ensure clear and simple information provision to consumers pre-sign up and once they are on a contract, including a clear explanation of the risks involved in signing up and alerts before price changes.
- Ensure fair contract terms including not putting undue liability and risk on the consumer, and not locking consumers into contracts or products.
- Review lines of responsibility and accountability to ensure consumers don't 'fall through the cracks' when companies, e.g. battery manufacturers, suppliers and demand aggregators, cannot agree who caused detriment to a consumer.

Some of these recommendations may be fulfilled by demand aggregators signed up to the Flex Assure code of conduct which covers topics such as marketing and contract terms. But this is a voluntary scheme and will therefore not cover all companies that will engage energy consumers on flexibility.

In a nutshell, we would welcome a review of current regulation, including those governing suppliers and demand aggregators, to ensure that they are up to date to protect consumers who deliver flexibility through whatever route they choose.

Protections for those not engaged

On the journey to building a smart and flexible network we should be careful not to leave some groups of consumers behind. A shift to a smart and flexible network is promising to bring some shared savings to all energy consumers, but it will also open up opportunities to some which others will be excluded from.

While emerging tariffs may only be adopted by a minority of consumers, there is the potential for their introduction to have wider impacts, both positive and negative, for the non-participating majority of consumers who are left behind. System cost reductions and other efficiencies may be achieved in the medium to long term, but in the early

²⁵ Citizens Advice, Citizens Advice, [Towards a smart, flexible energy system](#) (January 2017)

²⁶ For example, on Octopus' dynamic ToU tariff *Agile* customers receive a guarantee that they will never pay more than 35p/kWh

transitional phase consumers who stand to benefit (in some cases without altering their behaviour at all) will switch to time of use tariffs to lower their bills. Until the efficiency savings from this change are realised, suppliers may seek to increase costs for their non-time of use customers. There is a real risk that consumers who, for whatever reason, are not able to be flexible in their energy use, end up footing higher energy bills. For those consumers, sufficient protections and support must be put in place.

Consumer education on Demand Side Response (DSR)

Any “proactive communications on smart energy” from either Government, industry or local actors will likely be more impactful if they relate to energy consumers’ own lives and the particular elements of the smart energy system they are coming across (e.g. when they have a smart meter installed or when they buy an EV). Whilst waiting for the market to develop to a certain size is the right approach before launching, say a national campaign on flexibility, we argued in our previous response that consumers should also be given information at trigger points when it actually becomes relevant to them.

People who are having a smart meter installed should be given information on how to use their smart meter through a demonstration of the in home display (IHD) and given energy efficiency advice tailored to their home and how they use energy. Furthermore, suppliers are obligated to tailor any communication to the needs of vulnerable consumers.

Similarly, we believe that electric car drivers who charge predominantly at home would, at a minimum, benefit from being made aware of how their car may impact their overall energy bill and be encouraged shop around for better tariffs. Given Government’s plans to make all chargers smart-enabled and the importance of smart charging for the energy system (as alluded to above), proactive and early communication to EV buyers in this area would also seem prudent.

Buildings

In future, the Energy Performance Certificate could show whether a home has a smart meter or is suitable for other smart home technologies. Further information of this kind should only be included if they can be done without adding complexity to the assessment process or usability of the certificate.²⁷

We welcomed recent regulations to encourage the installation of heating controls in households that do not have them. However, consumers often do not use controls effectively, or at all, undermining the benefits of increasing installation figures. Consumers, particularly vulnerable consumers, will not receive the full benefits of controls unless they are made easier to use and understand, and more effective advice on their use is provided. Only a subset of consumers - who are likely to be better-off and better-engaged - are opting for smart controls. However, it appears the current market is unlikely to deliver more user-friendly controls for most consumers. More quantitative research is needed to understand how consumers use controls and how this affects

²⁷ See Citizens Advice, [Energy Performance Certificates in Buildings - Citizens Advice response to Call for Evidence from BEIS and MHCLG](#) (October 2018)

energy use. The government needs to take action to drive the installation of more user-friendly controls, for example through the Energy Company Obligation.

Markets which work for flexibility

All the above efforts will only go so far in realising consumer benefits from the future energy market. Giving flexibility equal access to markets where it can be valued properly, and creating new markets through the Distributed System Operator (DSO) transition are vital steps to making flexibility a cornerstone of the GB energy system.

We see an opportunity in independent aggregators as they enable SMEs and domestic consumers to participate in flexibility markets and benefit from associated savings and earnings. We therefore welcome Ofgem's moves to provide a level playing field for them. In this context we are also supportive of TERRE, the implementation of which is set to deliver €13 million per annum in estimated benefits for the GB energy system²⁸.

Similarly, we welcome the ESO's efforts to allow flexibility providers to stack revenues across different markets which will enable consumers to earn more for their flexibility and encourage more consumers to provide flexibility.

In our response²⁹ to the ENA's Future Worlds consultation in 2018, we urged the DNOs to progress with building a smart grid and establishing markets for flexibility. Like Ofgem and BEIS, we recognise the potential for conflicts of interest that arise if networks are procuring as well as providing network services. We would be supportive of tight parameters in this area to ensure neutral market facilitation. This should include that DSOs should not be allowed to own and operate directly any distributed energy resources such as storage or electric vehicle charging infrastructure. Otherwise there is a risk that they favour their flexibility services over others, thereby raising costs for consumers. It would also undermine the confidence of market participants in the impartiality of the DSO. We spelled out further ideas on neutral market facilitation in our Future Worlds consultation response.

It is also essential that the RIIO-2 framework provides stronger incentives for networks to use flexibility where this is the most efficient option. We will reflect this in our response to the currently open sector-specific consultations.

Relating to the Capacity Mechanism specifically, we welcome and support initiatives by BEIS to try and create a more level playing field for both supply and demand resources. Despite this, the Capacity Mechanism is likely to remain a relatively clumsy way of rewarding flexibility as payments and penalties are principally driven by whether the contractee has delivered against their expected running profile during a scarcity event. This means that inflexible assets are rewarded through the scheme as well as flexible ones. Alternative mechanisms like the Balancing Mechanism are more able to signal the value in scarcity. The implementation from 1 November 2018 of (nearly) fully marginal

²⁸ National Grid, [TERRE and Wider Access Benefits and Costs](#) (April 2018)

²⁹ Citizens Advice, [Consultation response to Open Networks: Future Worlds](#) (September 2018)

cash-out in the electricity imbalance settlements as a result of Balancing and Settlement Code modification P305 should help to further signal the value of flexibility.

Within the Capacity Mechanism, the capping of non-delivery charges at the level of annual payments means that participation in that scheme comes at very limited risk. This may encourage liquidity, and low bids, but it may also dilute the protection that the scheme offers (because even unreliable providers are likely to make money from it). It may also have contributed to the very low clearing prices that we have seen in auctions to date. While low clearing prices are good in the short term for consumer prices, they may also mean that new flexible plants, whether on the supply or demand side, cannot be built off the back of the scheme in its current form.