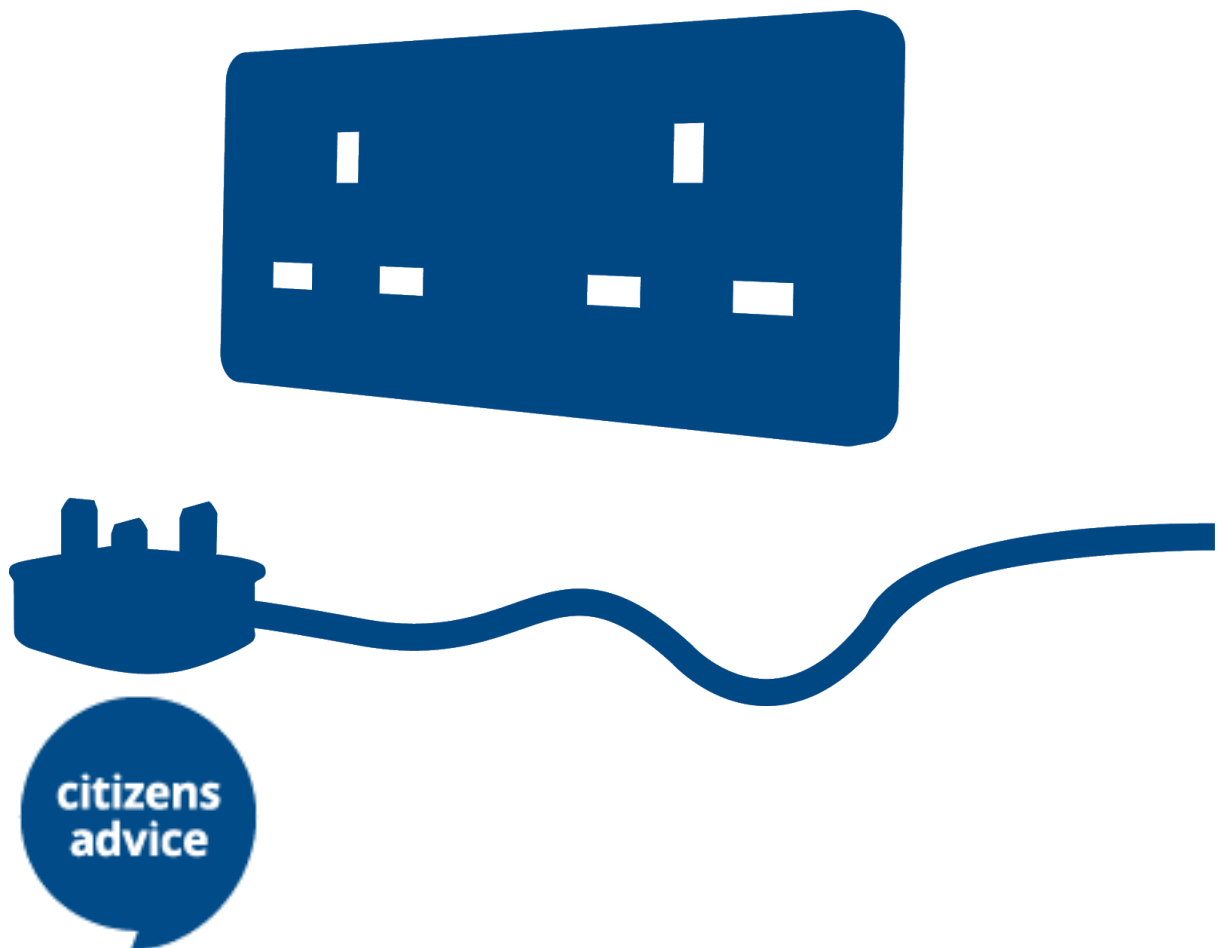


# **Energy Networks Association Open Networks Project: Consultation on future worlds impact assessment**

Citizens Advice submission  
May 2019



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# Introduction

Citizens Advice welcomes the opportunity to respond to this consultation as part of its statutory role to represent domestic and small business energy consumers in Great Britain.

We have previously contributed to the Open Networks project through responding to the Commercial Principles consultation<sup>1</sup>, the September 2018 Open Networks: Future Worlds consultation<sup>2</sup>, and via our membership on the Open Networks Advisory Group.

Deploying flexibility technologies is a key driver to reducing costs for consumers as well as to ensure that emissions that are contributing to climate change are minimised. Consumers are estimated to financially benefit by between £17bn to 40bn<sup>3</sup> by 2050 from the deployment of flexibility technologies. These savings will be generated through the avoidance of capital investment in electricity system infrastructure and generation. Consumers may also benefit directly through being able to earn money by selling their energy-use flexibility to the electricity network.

In addition to responding to the consultation questions, we have also provided comments on the consumer considerations and design features we would expect to see incorporated within any “Future World”. We have not recommended a particular Future World model given the uncertainties as to costs and benefits at this stage. However, we have made a series of recommendations to ensure that consumers are at the heart of decision-making in this process. These recommendations address some of the ‘unintended consequences’ noted at page 48 of Baringa’s assessment.

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<sup>1</sup> [Citizens Advice response to ENA’s Open Networks Commercial Principles paper, October 2017.](#)

<sup>2</sup> [Citizens Advice response to ENA’s Open Networks: Future Worlds consultation, September 2018](#)

<sup>3</sup> [Carbon Trust, Imperial College, 'An analysis of electricity system flexibility for Great Britain', 2016](#)

# Considerations for choosing and designing future flexibility models

## Putting people at the heart of decision-making

We appreciate Baringa giving consideration to consumer impacts throughout their assessment, for example, in considering fairness and cost outcomes, different geographical impacts, and the need for social policy to protect fuel poor households and those who cannot be flexible in their energy use. Drawing out consumer impacts, and considering how different segments of consumers are impacted by different Worlds is something that should continue as the Future Worlds are further developed and analysed.

The impact assessment highlights that there is no one obvious winner amongst the different models for flexibility coordination. All come with relative strengths and weaknesses. When it comes to choosing which one is ultimately implemented, we believe Ofgem needs to weigh up between cost - which no doubt is an important factor - but also the outcomes each model delivers for energy consumers, citizens and communities.

## Ensuring data protection for consumers

Whichever model is implemented, the relevant system operator may collate large amounts of data from those providing flexibility services. This data could include information on energy usage by individual households or businesses and be held at various levels by service companies such as aggregators, energy suppliers, IDNOs, as well as the system operator.

Consumers need to have confidence in the processes surrounding the collation and use of their data, and which entities have access to it (including any on-selling of that data). It is therefore essential that adequate protections are put in place to ensure that consumers have transparency and control over their data.

## Managing regional distributional impacts

An unintended consequence highlighted within the impact assessment is the issue of regional cost difference in different network areas. At present, there are varying network costs to consumers in different regions due to the particular infrastructure and operational costs within each DNO region. The increased use of flexibility may exacerbate those cost differences as some regions with higher

amounts of flexibility resource may see substantially decreased costs whereas areas of less resource may see stable or increasing costs.<sup>4</sup>

Ofgem should monitor the impact of such regional differences on consumers' bills. It may be worthwhile to assess whether the benefits generated in one region should be shared with consumers in another region that faces higher costs due to lack of flexible resources.

### **Consumer protections when using flexibility products and services**

As much as flexibility provision can be a win-win for consumers and networks, it nevertheless comes with risks for the households and small businesses engaged in it. We are concerned that the current consumer protections in place are not sufficient to ensure that consumers have a positive experience with flexibility provision. Many of these concerns focus on the retail market and the activities of new unregulated actors such as demand aggregators but they also relate to DSOs and other flexibility coordinators.

In the future, there is likely to be increasing complexity within flexibility markets as consumers may contract with smart appliance manufacturers, independent DNOs (IDNOs), private networks, peer to peer trading, energy suppliers, as well as aggregators. In this scenario, there may be multiple layers of contractual obligation between a consumer and the ultimate user of the flexibility, e.g. the DSO or ESO. This brings various risks for consumers:

- Consumers may be unsure as to which company is accountable for legal or operational issues, security of supply, and communications. This makes resolving problems and receiving compensation much more difficult.
- Difficulty in establishing legal liability for damaged equipment which may be remotely turned on and off during a DSR contract's operations, e.g. if the appliance breaks, or its life is shortened, or there is some other consequential loss (such as fridge contents).
- Consumers may be contractually bound into DSR schemes by bundled appliance offers. Consumers may then find it difficult to cancel these contracts.

In order to adequately protect household and small business consumers undertaking DSR, we'd like to see networks, system operators and Ofgem enhance the consumer experience through:

- Considering a framework for accountability when multiple parties are involved in a consumer's DSR - this includes the flexibility system operator.

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<sup>4</sup> Citizens Advice, ['Take a walk on the demand-side: Making electricity demand side response work for domestic and small business consumers'](#), August 2014.

- Providing clear avenues for seeking redress.
- Considering whether system operators should only work with demand aggregators which abide by certain Codes of Conduct or are accredited (depending on what schemes and codes spring up around demand aggregation).
- Investigating feasible models for limiting financial liability for DSR participants.

## **Putting the right rules in place for system operators**

### **Ensuring independence and transparency**

Whichever flexibility coordination model is eventually implemented, there needs to be independence and transparency of the network management actions taken to ensure that identification of constraints, asset investment decisions, and flexibility dispatch are conducted fairly and in consumers' best interests. There will always be a concern that a company holding a dual role of managing an infrastructure network and being involved in flexibility coordination could choose to expand its regulatory assets to ensure a safe and long-term return over choosing a lower cost/third party flexibility solution. Neutral market facilitation will also require a continued assessment of whether Distribution Network Operators (DNOs), if they are also acting as Distribution System Operators (DSOs), should be permitted to compete with third party companies or own their own flexibility resources. There will be a perception that DNOs/DSOs using their own flexibility or smart grid solutions are likely to prefer their own assets over competitors' solutions.

Independence and transparency can be achieved in a number of ways by using or adapting one of the Future World models:

- Using an independent third party to verify the appropriateness and fairness of constraints identification, asset option costings, and flexibility dispatch decisions if the DNO/DSO role is combined under one legal entity/company structure.
- Separating the DNO and DSO functions through Chinese walls or ultimately by full legal separation should there be a continuing perception or actuality of conflict in these roles.
- Ensuring that the system operator entity does not own or operate its own distributed energy resources.
- The Electricity System Operator (ESO) could become the independent flexibility coordinator.
- A legally independent third party flexibility coordinator could be established.

## **Broader environmental and social issues**

A system operator may wish to pursue the cheapest and most efficient option for the network, whether reinforcement of infrastructure, smart grid solutions, or by using a distributed energy resource. In addition to these factors, a wider policy discussion would be welcome as to whether the system operator should be required to consider local and national environmental and social implications surrounding their operational and investment choice, and which system operator model would be best suited to fulfil this function.

It may be relevant, for instance, for a system operator to consider issues relating to:

- Climate change.
- Positive economic impact in a local area.
- Sustainability of the energy mix.

We would welcome further consultation by the ENA on this topic.

## **Incentives for system operator(s) need careful consideration**

Throughout Baringa's assessment and during discussion at the ENA Open Networks events, there has been mention of the need for a realignment of financial incentives to deliver the new system put in place. These incentives will need careful consideration. We do not believe that the system operator should receive financial incentives for selecting a lower cost or more efficient option. We consider that a company acting as a flexibility system operator should be under a duty to select the most efficient solution and be recompensed for its administrative costs. Any incentives paid beyond those costs should be aimed at recognising the whole system impact for consumers, otherwise the benefit of flexibility to consumers will be reduced.

# Consultation questions

**Q.1 Please confirm which stakeholder group you believe you belong to; this will enable the Open Networks Project to understand the spectrum of respondents to this consultation.**

Citizens Advice is the statutory watchdog for energy consumers, specifically households and small businesses. We use data gathered from our millions of clients regarding their issues in relation to energy to help prioritise and respond to problems in the energy market. We also commission and undertake our own research in energy issues to inform the debate and provide policy recommendations and solutions on behalf of current and future consumers.

We have a particular interest in ensuring that consumers in vulnerable circumstances or at risk of exclusion have appropriate support and protections, and will not be left behind in the transition to smart and flexible energy system.

**Q3. Do you agree with the conclusions and insights within the Executive Summary? If not, please explain your rationale. Please provide reference to more detailed comments against individual sections if this is appropriate.**

We agree with the conclusion that, despite detailed modelling and consultation by Baringa, all that can be said at this stage of the assessment is that all flexibility coordination models are viable, and that they come with relative strengths and weaknesses. This strikes us as a fair assessment given the many dependencies and assumptions underlying the assessment.

We believe that Ofgem and BEIS, in reference to their smart and flexible system plan, should now consider the findings, monitor the “trigger points” that may make one or the other “World” more beneficial, and have a wider debate around which energy system objectives we want to pursue as a nation. For example, as per the table on page 6 of the impact assessment, do we want to pursue the lowest cost option, or the one which best helps us decarbonise heat and transport?

**Q7. Do you agree with the areas identified for further work in the 2019 workplan and the further work ideas in the impact assessment or do you feel there are other areas of work that should be prioritised to progress in this area?**

From the chart outlining further work in 2019, we would be keen to understand whether or when the Open Networks project would consider the Future Worlds



assessment “complete” and will hand over the findings to Ofgem and BEIS for further decision-making. Alternatively, will this be a continuous assessment?

We’d also like to know when the Open Networks project would consider that all ‘least regrets’ activities that DNOs and ESO can undertake are depleted, and Ofgem and BEIS need to give some kind of steer for flexibility coordination to develop efficiently.

The current series of Ofgem and BEIS network charging reviews will impact the decision of which operating model should be chosen for flexibility coordination. The charging reviews could alter how the cost of the networks is allocated to different groups of consumers and how much it costs to connect to networks. We expect the the results of the reviews to have great implications for the cost effectiveness of the Future World, creating the need for updated cost benefit analyses in the future.

### **Q8. What future work do you believe would enhance the debate and body of experience around transitioning to the potential Future Worlds?**

Baringa raises key questions in their impact assessment which we agree need answering in order to make flexibility deployment a success for all consumers:

- *What is the value of flexibility to network operators at low voltage?*

Answering this question is key for consumers to know how much benefit there is in being flexible.

- *What are the potential conflicts of interest of integrated network and system operation and how can they be mitigated?*

Only by avoiding or mitigating conflicts of interest can consumers and other market participants have faith in flexibility markets functioning properly, and will consumers and the system see the biggest possible benefits of the smart and flexible transition.

- *How can industry arrangements facilitate a different pace of change across regions?*

We do see the potential of some regions being “left behind” in the move to smart and flexible networks. Already research<sup>5</sup> is showing that some parts of the country are charging ahead with the energy revolution, using more alternative fuels, breathing cleaner air, and being more energy efficient. This gap could widen if DSOs develop at a different pace, or flexibility markets work better in some areas than others. Industry and Ofgem

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<sup>5</sup> Energising Britain (2018), drax, Imperial College, E4tech  
[https://www.drax.com/press\\_release/energy-revolution-creating-two-tier-economy-leaving-millions-families-businesses-behind/](https://www.drax.com/press_release/energy-revolution-creating-two-tier-economy-leaving-millions-families-businesses-behind/)

should keep an eye on those developments and seek to ameliorate them if needed.

- *Defining the commercial arrangements for the Future Worlds which will have important bearing on business cases and the allocation of risk; and Mapping the accountabilities and responsibilities in each Future World.*

Once commercial arrangements and responsibilities for each World are known, it will be possible to assess further consumer outcomes and risks between models which at the moment, with the assessment focusing on broad costs and benefits, is not possible.

**Q17. Do you agree with the trade-offs of each of the Future Worlds identified against each of the high level criteria in Table 1 of the Executive Summary?**

We agree that the trade-offs listed there have potential up- and downsides to each World. We do wonder to what extent these assumptions can be substantiated by looking for examples around the World where certain models have been implemented. For example, where a separate Flexibility Coordinator exists, has there really been a loss of efficiency in decision-making or is this a theoretical fear? Is World B really more complex to operate or can UKPN's and the ESO's project *Power Potential* show us that this is, in fact, not the case?

**Q18. Do you agree or disagree with the Appendix A approach of ranking of worlds to help identify the strengths and weaknesses of each World against each criteria? If you disagree, please explain your reasoning.**

For the purposes of this exercise, we found the ranking approach informative. It was crucial that Baringa spelled out their assumptions behind the rankings so that we could follow their logic. However, we are cautious not to over-interpret the rankings at this stage, as they are made based on many assumptions and unknowns.

**Q20. Do you agree or disagree with the list of potential unintended consequences identified in Section 4.5, and their prioritisation and potential mitigation as charted in Figure 20? If you disagree, please explain your reasoning. Should the Open Networks project progress further on unintended consequences?**

We disagree with the location of "poor engagement of consumers" in the prioritisation grid. The scale of impact of poor engagement of consumers is ranked as relatively low. But who are we counting on to provide flexibility from the demand side to the grid? Consumers - especially if you consider industrial

and commercial consumers with their relatively larger flexibility capital. Their engagement is paramount to the success of DSR and should therefore be ranked highly in terms of risk and impact.

We agree with the assessment that this is a risk that is relatively complex to mitigate for DNOs and the ESO. They can only do so much to influence positive consumer engagement with flexibility. Since presumably a lot of consumers will engage through their supplier or a demand aggregator, it is actually in the networks' interest that those intermediaries provide a positive experience to consumers to make them more likely to provide flexibility to the grid.

As the Future Worlds are further developed and described, we believe that the work on unintended consequences and risks also has to progress, to identify and mitigate potential risks to consumers.

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Published May 2019

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Registered charity number 279057.