Use of AI within the energy sector call for input

Citizens Advice Response

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May 2024

Introduction

For many consumers, AI is already a feature of their interactions with the energy market. AI promises to bring efficiency benefits that could improve customer service and assist in the transition to net zero, but it also poses some significant risks. As the regulatory approach to AI continues to evolve, we welcome Ofgem's engagement with this important topic.

Our response to Ofgem's call for input focuses on key issues for consumers and the regulatory approach that we believe will provide the necessary protections. We focus on the implications that AI may have on fairness and ethics, outlining the proven impact of AI in other markets on consumers with protected characteristics. We also discuss the potential benefits of Consumer Duty style regulation which can keep pace with technical advances and adequately monitor the impact of AI on consumers. Finally, we look at the impact AI is likely to have on access to redress, and the important role that consumer advocates can play in levelling the playing field.

1. Do you agree with the overall approach to identify how the five AI principles are captured by the current legislative and regulatory framework that applies to the energy sector? We are particularly interested in your views around the extent current licence obligations capture either directly or indirectly the five AI principles.

Yes.

2. Do you agree with the initial findings around the potential issues or challenges of applying the AI principles in the energy sector? We are particularly interested in your views around the novel issues we have identified, the multi-regulatory framework and monitoring and enforcement implications.

Monitoring implications

We largely agree with Ofgem's assessment of the potential issues and challenges of applying AI principles in the energy sector. In particular, we welcome the focus on an outcomes based approach to regulating AI. We believe that principles or "outcomes based regulation" is the best approach to tackling AI related harms for a number of reasons. As Ofgem outlines in the call for input, an outcomes based approach is technology agnostic. Fair outcomes for consumers remain the same whether AI is being used to deliver those outcomes or not. This approach is particularly well suited for regulating technology that is developing at such a fast pace and outstripping the technical expertise of many regulators. Rules, which can take well over a year to write, consult on and implement, can be out of date by the time they're finalised. Outcomes are more stable.

Decisions produced by AI and machine learning algorithms are often the product of "black boxes". In practice, businesses will measure the success of that black box on whether it meets whatever goal or outcome the business is seeking to achieve (e.g., increase in sales, higher levels of engagement, increase in profit). Regulators will need to take a similar approach of looking at whether AI is delivering the right outcomes for consumers in their markets. But to do this,

regulators need to set out what outcomes their markets, not just AI, need to achieve.

It is essential that new technology is developed in a way which works for everyone, but our experience is that the needs of people in vulnerable circumstances are often overlooked. Ultimately, the outcomes this group of consumers need from markets are the same as those of other people but systems which work for most people might fall short for people with more complex needs. A regulatory framework which focuses on outcomes and requires firms to take additional care to ensure that people in vulnerable circumstances are also able to achieve these outcomes, is an important part of the solution.

While Ofgem focuses on consumer outcomes in its compliance and enforcement work, we believe that the regulator should be more explicit in requiring energy companies to actively monitor consumer outcomes, particularly when AI is being used. In 2022 we wrote about how Ofgem could upgrade its regulation to mirror the approach taken in the Financial Conduct Authority's consumer duty.[1] The FCA's guidance outlines both the requirement to monitor outcomes for "customers with characteristics of vulnerability or customers who share protected characteristics" and provides innovative suggestions for collecting the data firms might need to do so.[2]

Multi-regulatory framework
In the call for input, Ofgem highlights the role that the Equality and Human Rights Commission will play in regulating the equalities implications of AI. At the moment the EHRC is responsible for enforcing the Equality Act primarily through strategic litigation. However, the barrier for consumers litigating an Equality Act complaint related to AI is high. This is especially the case as AI raises the potential for harms that are "minor-but-widespread", which means that consumers are often unaware of the harms they are experiencing and even less

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[1] Citizens Advice, Raising the Bar, 2022.
[2] Financial Conduct Authority, Final non-handbook guidance for firms on the consumer duty, 2022.

likely to know whether they have been driven by AI.[3] At the same time, we are concerned that the EHRC lacks the resources necessary to deal with AI's equality implications. We're interested in exploring a regulatory approach whereby responsibility for enforcing the Equality Act is embedded within sector regulators in the same way that responsibility for competition is.

3. Do you have examples of AI use cases within the energy sector in Great Britain or elsewhere that we have not included?

n/a

4. Do you agree with the factors we have identified that could inhibit the adoption of AI in the energy sector?

n/a

5. Do you agree with our proposed approach to evaluating the risks associated with the use of AI in the energy sector?

Yes

6. Do you agree with how we have approached evaluating risks from a consumer perspective? We would particularly be interested in your views about the issues of fairness, ethics, transparency and explainability.

Fairness and ethics
We welcome the emphasis that Ofgem has placed on fair outcomes for consumers and the extent to which they have highlighted the risk of discrimination and bias in AI. It is important to note that AI risks – and benefits – can emerge not only from computational and statistical sources but also human and systemic biases. Any approach to analysing risks associated with AI should acknowledge that AI risks can arise from the interplay of technical aspects combined with societal factors related to how a system is used, its interactions with other AI systems, who operates it, and the social context in which it is deployed.

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[3] Jabłonowska et al, Consumer law and artificial intelligence Challenges to the EU consumer law and policy stemming from the business' use of artificial intelligence, 2018

Technical measures aimed at addressing the risks associated with unfair outcomes (e.g. ensuring accurate and representative training data, bias testing) are an important part of the toolkit available to companies, and Ofgem should establish guidance around how these technical measures are undertaken.

One concern, for example, is whether or not energy supplier's demographic data is of high enough quality to enable effective bias testing. Suppliers often struggle to identify the bill payer when consumers are using traditional prepayment meters, and even when they do know who the bill payer is, it is unlikely a supplier will have data on who else is living in the house. In the private rented sector, bill payers may in fact not be residents at all but rather landlords who pay on behalf of tenants. These gaps in data are likely to affect certain groups of consumers more than others, particularly consumers who live in the private rented sector or are on low incomes. Suppliers and network operators could consider exploring the use of proxy data to help to monitor the outcomes of AI systems on groups of consumers who are not well represented in the data. Ofgem should also consider whether the use of AI systems in certain areas, e.g. where the health and welfare of energy consumers may be at risk, may require third-party audit.

However, as the US National Institute of Standards and Technologies has highlighted, technical measures alone are insufficient to address all risks associated with AI.[4] There is a need to adopt a wider social-technical view of AI to understand how AI systems operate within their broader contexts and the impacts they have. For example, data used for training AI could implicitly include biased human decisions or reflect historical or social inequities, even if sensitive variables such as gender, race, or sexual orientation are removed. There are numerous examples of this kind of bias arising not out of technical flaws, but out of broader social contexts: for example, research found that of the black and white patients assigned the same health risk score by an algorithm used in US health management, the black patients were often sicker than their white

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[4] National Institute for Standards and Technology (NIST), Towards a Standard for Identifying and Managing Bias in Artificial Intelligence, 2022

counterparts.[5] This reduced the number of black patients identified for extra care by more than half. The cause of the underprediction was that the algorithm used health costs as a proxy for health needs. Because of historic healthcare inequalities in the US, less money is spent on Black patients who have the same level of need, and the algorithm thus falsely concluded that Black patients are healthier than equally sick White patients.

While there is little concrete evidence of algorithmic bias in the current energy market, Ofgem should take note of the parallels between cases like these and potential applications of AI in the energy market. For example, AI models have been used to analyse individual preferences, financial habits, and past behaviours to recommend personalised debt repayment plans. The same thing could be done for consumers with energy debt. There is evidence that some groups face issues with energy debt at a higher rate than others: for example, Black people, despite making up around 4% of the total population of England and Wales, have averaged 10% of people coming to Citizens Advice with issues relating to fuel debt. If not managed carefully, AI models could incorporate existing biases present in processes like debt collection, and amplify them, resulting in worse outcomes for consumers with protected characteristics.

We welcome Ofgem's acknowledgement of the capacity of AI to drive unfair outcomes and of the kinds of approaches necessary to effectively address these outcomes (e.g. noting the need to understand the interaction between humans and AI as part of good practice.) We are concerned about the potential for AI to drive unfair outcomes for consumers with protected characteristics or in vulnerable circumstances. We believe the call for input overestimates the ability of the current regulatory system to address this risk.

We have spent the last 3 years investigating discriminatory pricing in the car insurance market. Our research found that people of colour are paying on average £250 more for car insurance than white people.[6] This trend appears to be driven in part by algorithmic bias that has amplified structural inequalities

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[5] Z. Obermeyer, B. Powers, C. Vogeli and S. Mullainathan, Dissecting racial bias in an algorithm used to manage the health of populations, 2019.
[6] Citizens Advice, Discriminatory Pricing: exploring the "ethnicity penalty" in the insurance market, 2022.

embedded in key data sets. Our experience from this work has been that both businesses and sector regulators struggle, in practice, to monitor data to identify potential discriminatory outcomes, act to address them and ensure compliance with existing equalities law. This conclusion is supported by a paper published by the law firm AWO on behalf of the Ada Lovelace Foundation, which concluded that the EHRC, as the main body responsible for enforcing equalities law in the UK:

a) Has relatively limited enforcement powers, especially vis-à-vis private entities;
b) Uses those limited enforcement powers sparingly and rarely;
c) Relies on its own investigations to uncover lack of compliance with the law; and
d) Is obliged to focus on only some areas given its broad remit and finite resources.

Enforcement of the EA by the EHRC therefore provides only a limited degree of protection from AI harms. It should not be expected that proactive enforcement by the EHRC will identify and prevent AI harms as a general rule. They will manifest in many circumstances, leaving individuals with the burden to identify them and seek redress.[7]

There are a number of approaches that could be taken to improving the enforcement of equalities law. If primary responsibility for equality is going to remain with the EHRC then significant improvements are needed to improve the regulators capacity to address AI issues. Another approach would be to embed responsibility for equality within sector regulators. This would function in a similar way to responsibilities around competition where both the CMA and sectoral regulators have a duty to promote competition.

Whichever approach is taken, it is important that it includes a broad, sociotechnical view of AI risk. It should support energy market actors to incorporate considerations of fairness and trustworthiness into the design, development, use, and evaluation of AI products, services, and systems. This should be complimented by an outcomes-based approach to regulation.

Digital Exclusion
In addition to the risk of bias in artificial intelligence, we are also concerned that AI may exacerbate the poor outcomes already experienced by digitally

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[7]A.   Lawrence- Archer and Ravi Naik, Effective Protection against AI harms, 2023.

disadvantaged consumers. In our 2022 report, Access Denied, we found that offline services are getting worse and consumers are at risk of being left behind by the market.[8] It is important that offline services are maintained and that all digital services are accessible.

Transparency

The call for input suggests that transparency should allow consumers affected by the use of AI to access sufficient information to enforce their rights. We agree that transparency around AI use is important. If consumers are interacting directly with AI, for example if they are receiving customer service from an AI chatbot, they should be informed that AI is being used. Ofgem should set expectations around this kind of transparency. However, transparency alone cannot ensure that consumers are able to receive adequate redress when they have been harmed by AI. AI systems are by their nature complex, and consumers should not be expected to have detailed knowledge of these systems in order to take part in the energy market.

Furthermore, as AWO outlines in their paper *'the clarity of legal rights to redress – including financial compensation – for AI harms through cross-cutting legislation is undermined by the fact that enforcing those rights is impractical in all but the strongest cases, or in the unlikely event that the claimant is very wealthy, since: a) Many claimants will require expensive legal representation, which could either prevent a claim entirely or significantly reduce compensation received; b) Adverse costs risks could make bringing a claim unrealistic; and c) Resolution through the courts is time-consuming and slow.'* It's also important to note that AI, because of the scale at which it acts, might result in 'minor but widespread' harms which are not large enough to incentivise individual action but may, on a larger scale, still be harmful.

Addressing the issue of transparency requires answering the question of who AI systems are transparent to. Levels of transparency and disclosure that are appropriate to consumers, for example, may be inappropriate for regulators. In acknowledging this, we believe there is a unique opportunity for statutory advocates to cultivate knowledge around AI and play an essential role in ensuring the consumer voice is represented across the supply chain. This would

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[8] Citizens Advice, Access denied, 2022,

include identifying risks, developing solutions and ensuring that consumers are able to seek redress even when they are unaware of the specific workings or even the existence of a given AI system.

In the energy market, consumers are supported by the energy ombudsman and the extra help unit but the call for input does not discuss how these organisations should be expected to deal with AI issues. There are a number of to be given the powers and resources they need to identify and address AI related harm. Another is for a cross sectoral AI ombudsman and statutory consumer advocate to be set up to grapple with these issues.

7. Do you agree with how we have approached evaluating risks from a market perspective?
We would particularly welcome your views about the issue of algorithms and collusion, and interoperability with international markets.

8. Do you agree with how we have approached evaluating risks from a company perspective?
We would particularly welcome your views about the issues of governance, accountability and redress, safety, security and robustness, and cyber.

AI has significant implications for the ways that consumers can seek redress when things go wrong. AI supply chains are complex, with consumer facing companies often relying on multiple other actors to develop their AI enabled products. It is not yet clear where liability for consumer outcomes and experience sits in this model.

Home energy management systems that are driven by artificial intelligence are an important example of where responsibility for consumer harm may be unclear. If home smart tech is interacting automatically with a supplier/aggregator/ third party intermediary to manage flexibility services then who is responsible if energy is incorrectly used at an expensive time? There are important questions regarding what the relationship should be between the end consumer, the business they're working with and the developers of AI. Consumer's interests must be represented along the whole supply chain.

Wherever liability lies, consumers should have a single point of contact for redress related to AI. In most cases, this should be the organisation that has a direct interface with consumers. This mirrors the approach that is included in supplier licence conditions whereby a supplier is responsible for consumer outcomes even when it has contracted services to a third party.

One of the unaddressed challenges related to redress is how to measure harms related to AI. This monitoring and measurement of harm will be vital in determining what form of redress is most appropriate for consumers. A consumer duty style approach to regulation which requires much more robust monitoring of outcomes would help to inform appropriate levels of redress.

9. Do you agree with how we have outlined the risks from a sustainability perspective and the need for guidance for the energy sector on its sustainable use of AI?

As the call for evidence outlines, it is vital that AI's role in the transition to net zero is weighed against the increased demand for energy and water use required to power the technology.

10. Do you agree with our proposed recommendations?

We agree with the proposed recommendations, and in particular welcome the focus on liability in the AI supply chain. Identifying who is responsible for providing redress to consumers when things go wrong will be vital to ensuring positive outcomes and building consumer trust. As outlined in previous answers, we believe that responsibility for redress should sit with the organisation that has a direct relationship with a consumer.

11. Are there any issues that are not covered by our recommendations?

There are a range of important issues included in the call for input that don't seem to be reflected in the recommendations. We would hope to see

recommendations that address consumer issues explicitly including equality and redress.

12. Should certain recommendations and issues be prioritised over others?

No

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