Sustainability *first*

Maxine.frerk@sustainabilityfirst.org.uk

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To: innovationcfe@energysecurity.gov.uk

Dear Retail Energy Markets and Consumers team

Towards a More Innovative Energy Retail Market - Call for Evidence

Sustainability First is a charity and think-tank focussed on social and environmental issues in energy and water. We have been closely involved in various regulatory debates, including around the RIIO network price controls as a member of Ofgem's Challenge Group. Together with Citizens Advice we are also now jointly supporting the DESNZ End User Challenge Panel for REMA, which is exploring the implications of REMA for the retail market.

We have a long history of engagement on demand side issues from the consumer standpoint. This includes membership of the Smart Systems Forum, the Ofgem strategic advisory group for market-wide half-hourly settlement, direct involvement in innovation projects for end-user flexibility and the set-up and strategy for National Grid's Power Responsive programme – designed to encourage non-domestic demand-side participation in balancing markets. We have responded to many of the Ofgem and BEIS consultations on retail strategy issues over recent years, drawing on our "What is Fair?" report, which looks at the retail energy market and how we pay for the energy transition.

Earlier this year we raised with Ofgem our concerns around the handling of Economy 7 in the price cap as set out in the Grid Edge Policy report[1] "It's a Lottery – How Ofgem's Price Cap Fails Economy 7 Customers" which is available on the Sustainability First website. The clear consensus from all the consumer groups at the roundtable we held was that the treatment of Economy 7 customers needs more focus by Ofgem – both because of the demographics of these customers and, looking ahead, because of the role time of use tariffs will need to play as part of the transition to net zero. There are significant lessons from the problems with existing basic time of use tariffs like Economy 7 for how we move towards a more innovative energy retail market.

One particular concern the Economy 7 work highlighted was Ofgem's lack of granular demand side data to enable them to form views on the fairness of supplier tariffs. This was an issue we had highlighted previously in our PIAG work on access to smart meter data for a public interest purpose. With suppliers having access to granular consumption data, we warned that Ofgem (and government) would be flying blind into the energy transition without access to anonymised / aggregated smart meter data linked to customer demographics to enable them to oversee the market as it evolves. It is important that Ofgem and DESNZ reflect further on what data they need going forward.

We welcome DESNZ's renewed vision for the retail market and in particular the desire to move away from switching as the measure of success for the retail market, the acknowledgment that energy is an essential service and of the crucial role that retailers play in the energy system transformation.

[1] Sponsored by Glen Dimplex Heating and Ventilation

We agree that now is not the right time to explore radical changes to the supplier model and that for the majority of customers the ability to have a single point of contact remains important.

At the same time, the supplier hub model gives licensed suppliers privileged access to customer half-hourly data from smart-meters (subject to consent) and hence beneficial market insight. Given this advantage, there needs to be a stronger expectation around the key role that suppliers must play in delivering the customer transition. DESNZ and Ofgem need to press suppliers far harder to make good use of their customer data to offer new tariffs and innovative services. Two important measures of future retail-market success should be a requirement for suppliers to show how they make use of their smart-meter data to (1) to identify which of their customers need more targeted support to engage in a successful transition and (2) how they are treating customers fairly.

Clearly, independent aggregators also have a significant role to play in household flexibility and we encourage DESNZ to move ahead swiftly with its plan to license these third party flexibility providers to ensure they treat customers fairly.

We note the intention in the DESNZ Retail Vision document to look at actions to reduce gas network costs. We would encourage government as a part of this to look longer term at how the largely fixed costs of the gas network will be recovered across a declining customer base as more customers move to electric heat (with the resultant risk of a "death spiral" of rising costs for those least able to move away – or a risk of stranded assets for the GDNs).

In terms of the call for evidence itself we fully support the need for a more innovative retail market to encourage uptake of low carbon technologies and flexibility. However, this cannot be left to suppliers alone. There is a need for a wider communications programme – perhaps led by a trusted / independent body - to help consumers understand the changes required to tackle climate change – and also independent advice on the best options for individual households. For those who cannot afford the upfront costs of new technology there need to be interest free loans or (for the most financially vulnerable) grants. Retailers can help with this through new business models such as heat as a service but these need to be regulated to give consumers the confidence to engage.

Drawing on our past work, our view is that regulatory protections around innovative retail markets and time of use tariffs should focus on:

- Ensuring suppliers are treating customers fairly and being transparent around how tariffs operate with consumers not expected to take on undue levels of risk on price volatility (or at least only with due diligence around a consumer's ability to deal with such risk, drawing on learning from the financial services sector);
- Enabling customers to effectively compare prices and to be clear if eg expected savings are before or after behaviour change;
- Understanding the distributional impacts of different tariff structures (which requires Ofgem to have much better data) – and having a clear policy answer on how to avoid those least able to afford smart technology paying the highest prices. We would not want to see DSR held back until all can benefit but there needs to be targeted support for those whose bills will become unaffordable as a result of market changes. In the past there has been a mantra that "everyone's a winner" from moves such as market wide half-hourly settlement. We dispute this view as even if a customer stays on a flat rate tariff their prices will rise as they bear a larger share of the fixed (peak related) costs of the system.

We have provided answers in the attached annex to those questions where we have particular evidence or insights to share. We would be very happy to discuss our past work and this response with you if that would be helpful.

Maxine Frerk

Associate Sustainability First

Cc David Murray, Judith Ward

Towards a more innovative energy retail market: a call for evidence

Consultation questions

5. What role could retailers play in deploying the capital investment needed for net zero? Do retailers have the right incentives to support investment in net zero technologies?

Even with half-hourly settlement, it is very likely that retailers would need stronger incentives to support the deployment of net zero technologies – especially those requiring upfront capital investment that therefore involve supplier risk – whether directly or indirectly through a customer contract.

The first REMA consultation[2] canvassed the option of supplier obligations for carbon reduction, stating (pp 80-81) : 'A decarbonisation obligation offers advantages which few other options under consideration can match…. Most importantly, investment decisions are market-driven…. suppliers have more freedom as to how they meet their obligation, rather than having to procure from Ofgem-accredited plants. They would therefore play a key part in decisions about the capacity mix, and would create more direct incentives for smaller-scale and demand-side flexibility, and electricity demand reduction. This would also create more incentives for innovation, both in terms of technologies and business models, which will be critical to least cost decarbonisation'.

The government summary of responses to the first REMA consultation notes that 48% of respondents disagreed with the option of a carbon reduction obligation for mass low carbon power while 42% agreed with taking this option further (pp 35-36)[3] . Those who supported the idea indicated that a supplier obligation could help drive innovative supplier business models, improve operational signals and new technologies. They also indicated that a supplier obligation could drive greater investment in renewables by incentivising innovation and by relying on market signals over Government procurement.

The government response indicates that it will not consider a supplier obligation as a main option for driving low carbon investment in the short-term – but also made clear that government would 'continue to consider the role of suppliers – and whether it is necessary to place duties and requirements upon them – in support of the delivery of other REMA options'.

In addressing how retail could be better and efficiently incentivised to deliver the customer transition – including to take on the risk associated with new capital investment on behalf of customers - we believe it would be extremely worthwhile for government to revisit earlier departmental work on a supplier obligation for average demand reduction as well as that of a carbon reduction obligation. Smart meters and half-hourly settlement will mean that earlier perceived obstacles around supplier base-lining and customer measurement could now be largely overcome.

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[2] 22 July 2022 - https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1098100/review-electricity-market-arrangements.pdf

[3] 2 March 2023 - https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1140189/review_of_electricity_market_arrangements_summary_of_responses.pdf

7. How can the retail market play an active role in unlocking flexibility in the energy system?

A key role of retailers should be to find creative ways to engage customers in providing flexibility. As set out in our What is Fair report, if suppliers face appropriate cost signals they will have an incentive to find ways to reduce those costs by getting customers to change their patterns of usage.

The supplier hub model gives licensed suppliers privileged access to customer half-hourly data from smart-meters (subject to consent) and hence gives them beneficial market insight. Given this advantage, there needs to be a stronger expectation around the key role that suppliers must play in delivering the customer transition. DESNZ and Ofgem need to press suppliers far harder to make good use of their customer data to offer new tariffs and innovative services to produce flexible customer outcomes.

8. How can retailers actively encourage and support consumers to engage in flexible consumption behaviour (including through automation and remote control of smart devices)? What barriers currently prevent retailers from doing so?

There are a range of different approaches that retailers could take from basic price signals (static or dynamic), through gamification to "as a service" models where the retailer controls the device but commits to meeting certain output standards (temperature or level of EV charge). It is for retailers to identify which approaches work best for different customers in different circumstances and how to make those offerings most appealing.

An Octopus Energy report[4], that Sustainability First Associate Maxine Frerk helped produce, talked about the importance of "customer centric time of use tariffs" and highlighted the twin challenges of getting customers to sign-up and then also getting customers to respond.

Automation is likely to be needed to cope with more complex dynamic price signals and remote control of smart devices would be needed for an "as a service" model (or a model where the customer agrees to allow a level of control in exchange for a reward). From a customer standpoint, this could equally be a flat load-management tariff or a dynamic tariff. However, we would also encourage DESNZ not to dismiss the role that basic time of use tariffs can play at least in the early stages when many customers will not have smart technology available.

In terms of current barriers we would suggest that these can be grouped under:

- lack of financial incentives for retailers. MHHS will largely address this but there are still inadequate price signals around distribution network charging which need to be addressed;
- limited penetration to date of low carbon technologies. It is clear that over the coming decades the move to electrify heat and transport will create significant new, more flexible loads on the system. However, as of today, the numbers of customers with such loads are limited. The extent to which heat pumps can be operated flexibly (absent adequate thermal stores) is still being explored[5]. Bi-directional EV charging is not yet generally available. As such the opportunities for flexibility are currently limited;
- lack of consumer interest. Even in the I&C market where half-hourly settlement has been in place for some time, many businesses still prefer an ordinary flat rate tariff because they do

[4] The report "Attractive, Easy and Affordable: putting customers at the heart of the energy transition" is here – pages 20-23 deal with time of use tariffs

[5] See for example UKPN's Watt Heat innovation project; NGED Equinox Innovation Project - July 2023

not want to deal with the inconvenience or added complexity of a time of use tariff. For domestic customers, recent focus groups that Sustainability First ran with household customers (not yet published) highlighted how they found even existing tariff structures confusing and were not interested in anything more complex. The role of community energy in driving consumer interest should be given more focus, in particular as solutions around transport and heat are essentially place-based.

9. What lessons can be learnt from the success of the ESO's Demand Flexibility Service with respect to encouraging consumers to engage in flexible behaviour?

We would highlight the CSE Report[6] as a valuable summary of lessons learned, including around the sorts of customers who engaged and their motivations.

10. Do developments since the original MHHS decisions bring with them any new expectations for the benefits and/or risks of the transition to this new settlement process?

We are pleased to see MHHS flagged as a key step towards a more innovative retail market. We have noted previously (eg in discussions on REMA) that new retail tariffs introduced in response to MHHS should be treated as the counterfactual against which any future thinking on additional retail price signals should be judged (e.g. for location).

Market-wide half-hourly settlement will prompt suppliers to de-average the retail tariffs on offer to individual households. This is because MHHS will, for the first time, significantly expose suppliers to the half-hourly costs of energy supply at the individual household customer level – creating new procurement and cost risk for suppliers. In principle, MHHS should drive suppliers to seek a good match in terms of their energy procurement with the half-hourly consumption patterns of their individual customers. It should also incentivise suppliers to seek to reduce their energy procurement costs in high-cost periods (including high imbalance costs), especially at peak times and periods of energy scarcity. MHHS should also incentivise suppliers to maximise procurement of low-cost renewable energy for their customers. Suppliers can therefore be expected to offer their customers important new signals designed to shape patterns of customer consumption, including price signals, designed to reduce supplier costs (eg avoided peaks, encourage overnight EV charging).

Handled well, MHHS should bring significant new opportunities for suppliers in terms of their customer offers and, in principle, bring new customer benefits subject to customer ability to be flexible in their consumption. Handled poorly, MHHS represents significant new cost-risk to suppliers, and therefore ultimately for consumers. With the introduction of MHHS in 2025-26, Ofgem will need to closely monitor supplier financial resilience under these new arrangements as well as how far suppliers are offering innovative tariffs and treating customers fairly.

The time it has taken to implement MHHS is a concern and lessons should be learned around how future changes could be made in a more agile way[7].

[6] https://www.nationalgrideso.com/document/283041/download

[7] The move to licence code bodies was in part motivated by a desire to speed up these sorts of changes but it is not clear how far that will work in practice.

In terms of changes since the original IA we would highlight:

- Progress on the smart meter rollout has been far slower than expected. Clearly, smart meters are essential for MHHS and for the provision of any flexibility services. We would encourage DESNZ to look at the case for prioritising the rollout of electricity smart meters over gas meters given the wider system benefits from electricity smart meters (and the risk of stranding with gas meters).
- Access to smart meter data now recognised as key. We have been concerned from the outset that the approach being taken to supplier access to smart meter data for MHHS which allows customers who might be disadvantaged to opt out of providing that data. It also provides an opportunity for ''gaming'' by suppliers (eg encouraging customers with peaky profiles to opt out). It therefore undermines the whole idea of "market wide" half-hourly settlement. While we understand the privacy concerns that drove this approach, we believe that with the increased evidence now available on the benefits and importance of a smart and flexible energy system, this decision should be reviewed.
- Growing awareness of location as an issue. The current focus through REMA on how to deal with the significant constraint costs on the system has re-opened the debate around locational marginal pricing (LMP). In its full form this would see suppliers facing different half-hourly prices for customers in different parts of the country. In our view there is a strong case for waiting to learn the lessons from national half-hourly price-signals to flow from MHHS before moving to this further level of complexity. As the questions in this call for evidence highlight, it is still unclear how far suppliers will reflect the MHHS price signals into their retail tariffs and what level of consumer uptake and response there will be. It is also still unclear how different the domestic response being sought would be across geographic areas (do we really want customers in the southwest to charge EVs in the afternoon when local PV is plentiful rather than at night?). MHHS is a first important step and one which will help build customer awareness and understanding of the idea that the time at which energy is used, is as important as how much is used. The locational angle is more complex as customers can't be expected to move house in response to these signals and the fairness issues are more complex as a result.
- Growing awareness of the technical challenges for distribution networks. With increased demand on distribution networks there are growing concerns that traditional reliance on diversity of load (ie people doing things at different times) will be less helpful going forward. Indeed, there are risks that with more innovative tariffs and home automation we could face increased problems on the distribution networks (if eg all EVs start charging at exactly the same moment). How to incentivise diversity is not easy but this is an area that merits some attention as new tariffs are introduced in response to MHHS.

11.Do you expect MHHS to impact on the tariffs retailers offer in the market? Why? When do you expect to see these changes (i.e. pre-2025, during the transition to MHHS, or after the full migration of customers)? Can you provide examples?

See question 10.

We would certainly hope so and this is the whole basis on which MHHS has been developed. Clearly some suppliers like Octopus have gone early and will have learned a lot through doing so (as well as building a reputation as leaders in this market). A few other suppliers are offering EV tariffs recognising that this is where there are actually significant loads, which can also be flexible.

The wider issues in the retail market will have an impact here. Under MHHS, with an effective competitive market, if a supplier did not reward customers who have a generally flatter load profile (eg through providing a time of use tariff), they would risk losing them as they will be attractive to other suppliers (due to their lower cost to serve under MHHS). However with the current state of competitive inertia in the retail market this pressure will be less.

Moreover, the introduction of half-hourly settlement for profile classes 5-8 in the business market does not appear to have led to the development of time-of-use tariffs in that market. Understanding the reasons for that might provide some useful insights around likely trends in the domestic market.

12.Do retailers have access to the datasets and digital tools necessary to develop and offer innovative tariffs, once MHHS is in place? What are the barriers?

Suppliers do have access to customer half-hourly smart meter data but it is subject to customer consent. In the discussions around access to half-hourly data for settlement we asked Ofgem for aggregated data on the number of customers who had opted out of providing daily data or opted in to providing half-hourly data to help us understand the scale of the issue. We were unable to access that data but DESNZ might usefully request that data if it does not already have it.

For other third parties there is more of a challenge. As part of our PIAG work we proposed the creation of aggregated / anonymised datasets that could be of value for wider public policy purposes but could also be of value to innovators looking to develop market propositions. We know the DESNZ statistics team have taken forward some of this thinking but, as far as we are aware, there is still no obvious data source for innovators to draw on beyond the UCL SERL database (a sample of ~13,000 households who have consented to share their data) which requires an academic partner to access.

15.What more can retailers do to build greater trust with their customers? What can government do to support this?

Building trust is essentially about getting the basics right and delivering on promises. Even where trust in energy suppliers as a whole is low, customers can still trust their own supplier if they have been dealt with well.

With the move to more innovative tariffs there is a role for government (perhaps working with an independent body like Smart Energy GB) to help build understanding of the need to rethink how and when we use energy to take advantage of the times when the wind is blowing and the sun is shining. Absent this basic awareness there is a risk that efforts to charge more at peak times will be seen as “greedy” suppliers looking to charge more when people most want to use energy.

Government must address the many barriers to inclusion for those customers unable to afford the upfront and / or running costs of low-carbon technologies. This would improve customer ‘buy-in’ and therefore trust, given that the uptake of net-zero technologies must ultimately be universal.

18.What opportunities and benefits might better use of consumer data by retailers provide consumers in the future? We would welcome specific evidence on:

> 18.1 What data sets, when shared with authorised third parties or suppliers, are necessary to support consumers with more tailored interventions?

The ESO's Demand-Side Flexibility programme (winter 2022-23) has demonstrated the extensive data-requirements needed from suppliers and from third party intermediaries (base-lining, metering, verification, billing) to permit households to participate in providing Balancing Services to the ESO[8]

> 18.3 How retailers might do more to promote the benefits of greater access to consumer data and ensure that consumers are aware of data privacy protections.

See question 7.

20.Can you provide any evidence of the extent to which consumers understand current non-standard tariff offerings, such as EV or Time of Use tariffs? How does this vary for different consumer groups? What can be done to increase this understanding?

Our work on Economy 7 tariffs and in particular the recent Grid Edge Policy report has highlighted the real issues with customer awareness of how this most basic of time of use tariffs operates and the general lack of transparency in this part of the market which makes it hard for consumer advisers to help customers understand if they are on the right tariff for them.

The report notes that most customers on an Economy 7 or similar tariff have a fairly poor understanding of how their tariff works as reflected in the Citizens Advice "False Economy" report (Sept 2018) on legacy time of use tariffs (which built on their earlier report "From Devotees to Disengaged" (2012)). This found that the primary issues faced by Legacy Time of Use (LToU) customers were inadequate information provision and difficulty in switching suppliers. In a survey of 500 LToU customers, around a quarter were unsure of the hours when the cheaper offpeak rates were available. Given the very significant differences between day and night rates currently for some suppliers this is a real concern. Suppliers should be required to regularly remind customers of the hours that apply to their tariff.

Poor customer understanding will be an even bigger issue with the more complex variants like Economy 10 or Total Heat Total Control.

At around 10% of domestic customers[9] this is not a niche that can simply be ignored and ensuring these customers can make informed choices about their tariff and their consumption is important not just in terms of protecting a key group of customers but also in what Ofgem could learn about how to regulate more innovative tariffs going forward.

In September 2018, Citizens Advice concluded in their report on legacy time of use tariffs that if the long-standing problems of these tariffs were not fixed at that point, then new time of use customers would experience the same frustrations in the future, stating that 'suppliers and regulators need to act now'. Recently, reviewing progress for the Grid Edge Policy Economy 7 report it is clear that still nothing has changed.

While awareness is likely to be much higher for customers on EV tariffs or products like Agile Octopus, these customers are highly engaged early adopters. The lessons from Economy 7 are much

[8] https://www.nationalgrideso.com/industry-information/balancing-services/demand-flexibility-service-dfs
[9] The Grid Edge Policy report highlighted that numbers on Economy 7 tariffs are not actually known. Elexon have confirmed there are 3.5 million Profile Class 2 meters although not all of these will still be on Economy 7 type tariffs. According to DUKES 19% of domestic energy demand is Profile Class 2.

more relevant in looking at the challenges that might be expected in a move to widespread adoption of more innovative tariffs.

21.What interventions could empower consumers to find deals that are best suited to them? We would also welcome specific evidence on:

> 21.1 What more retailers could do to help their customers understand whether they are best served by their current deal.
>
> 21.2 How retailers and third-party intermediaries could play a greater role in increasing general consumer awareness of smarter products and services.

Again we would highlight the learnings from the Grid Edge Policy report on Economy 7.

Suppliers have a duty, as part of treating customers fairly, to ensure that the tariff a customer is on is suitable for their needs. With around half the customers on Economy 7 tariffs no longer having night storage heating it is clear that suppliers are not taking this responsibility seriously. The consensus of consumer groups discussing the Grid Edge Policy report was that suppliers needed to be proactive in looking at the customers' patterns of usage and contacting them if their usage pattern suggests the tariff is no longer suitable.

We also flagged the need for Ofgem to have more granular demand data to enable it to identify potential problems in the market (as per our previous PIAG recommendations).

We also advocated more transparency with suppliers being required to publish their tariffs in a way that would enable consumer advisers to provide support to customers who need additional help in understanding whether they are best served by their current deal.

22.Across both the domestic and non-domestic markets, are there particular groups of consumers who are most at risk of missing out on the benefits of greater innovation in the retail market? We would also welcome specific evidence on:

> 22.1 The main barriers which prevent these consumers (including those in vulnerable circumstances) from participating in, or benefiting from, innovation.
>
> 22.2 The interventions that could support these groups.

In thinking about this question we would encourage DESNZ to look at the Smart and Fair[10] framework developed by CSE.

In particular the ability to benefit significantly from innovation in the retail market is dependent on customers having the up-front funds to buy an EV, heat pump or solar / battery combination - or to have access to up-front grants plus an affordable long-term service contract for those technologies. But there are other barriers to take-up in each case. For example, for EVs access to off street parking is a factor – and indeed it should be remembered that only 38% of households in the lowest income decile own a car at all, compared to 78% overall and over 90% in the top four deciles with over half

[10] https://www.cse.org.uk/research-consultancy/about-the-smart-and-fair-programme/

of those owning more than one vehicle[11]. For heat pumps tenancy will be an issue and also the suitability of heat pumps for small flats is not yet established.

While novel retail propositions can potentially help with the take-up of these low carbon technologies it cannot fundamentally help with affordability at lower income levels.

Of course, there is scope for customers to benefit from more innovative tariffs even without these technologies. Although the savings will be lower, for households on low income who are struggling with their bills even small savings may be worth pursuing. We have also stressed the need to think about both the impacts before behaviour change (eg elderly people at home all day will have a flatter profile and may therefore benefit from static time of use tariffs) and the savings that result from changing behaviour.

As highlighted by our PIAG work, there is currently a poor understanding of how demand profiles vary by demographic, what the drivers are and hence what scope there might be for different customer groups to shift loads. Ofgem's distributional impact analysis for MHHS found little difference between broad socio-economic groups but failed to address the very significant differences within groups, suggesting that the standard income groupings are not really helpful in this context. Jacopo Torriti at Reading University has done some interesting work with diaries to try to better understand what activities sit behind different load profiles.

Other barriers link to digital literacy and the confidence to engage in the market which Ofgem and the CMA have previously identified as being more problematic for customers in vulnerable circumstances.

23. Can you provide examples of specific innovative retail propositions which might be particularly valuable for vulnerable consumers? Are there likely to be sufficient commercial incentives to bring forward these propositions?

Low income households will be particularly concerned about the uncertainty and downside risks with innovative tariffs – including contracts for low-carbon technologies that 'lock-in' with significant or unfair exit terms. As such they are likely to favour reward based (or upside only) offers such as the demand flexibility service.

As highlighted above Economy 7 is an area where there is scope for evolution and a better product offering and where many of the customers are either low income elderly or young and disengaged.

Observing the way suppliers typically approach the Economy 7 market we do have a concern that they are more focussed on the upper end of the market and the more exciting opportunities linked to EVs etc – a trap that it is easy for policy makers and Ofgem to fall into as well. It is not clear that this is an issue of commercial incentives per se but more a general perception around lower income households or customers in vulnerable circumstances being more costly to serve for a range of reasons and hence not a priority market segment for suppliers.

For heat pumps, the upfront costs, including installation, would need to be offered in an affordable long-term package without unjustified or unfair lock-in. Heat pump customers must remain free to switch to another supplier for their ongoing energy supply.

[11] ONS data on car ownership 2018 - here

24. Across this consumer-focused section as a whole, have we captured the main non-price opportunities and risks to consumers presented by a more innovative retail market? To what extent is the current consumer protection framework fit to enable these opportunities and manage and alleviate these risks?

The current consumer protection framework does need to evolve but critically as well this is about Ofgem's ability to oversee a more complex retail market and the improved demand side data they need to do that.

At present the regulation of product sales falls to the CMA and is outside Ofgem's remit (as evidenced by the recent issues with British Gas sales agents making false claims around hydrogen boilers). Mis-selling of "packages" combining low carbon technology and a tariff would therefore fall between two regulatory bodies and needs agreement on ways of working.

27.What changes may need to be made to existing contingency measures for dealing with market exits in a future market with a more diverse range of participants and business models? Please point to specific examples.

Customers who are sold Heat Pumps as a service-package - install, purchase / lease, maintenance, energy supply – will need particular consideration.

30.What risks or opportunities for retailers do you envisage in changes underway elsewhere in the wider energy system?

Unlike telecoms providers or motor-retail (which includes finance and leasing), current energy retailers have little or no experience of bundled service packages to lease or sell a high-cost capital item to a customer (EV, HP) - combining installation, capital repayment, insurance, maintenance and running costs. This represents a major risk for both current energy retailers and also for their customers.