

Understanding the Impacts of Ofgem's Targeted Charging Review

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Executive Summary

Ofgem are carrying out a major review of electricity network charges and have published proposals which would involve the introduction of a standing charge for domestic customers. The issues around network charging are technically complex but given the significant impacts that these changes will have on consumer bills it is vital that they are properly debated from a consumer perspective.

Currently the fixed costs of running the network (“the wires”) are recovered through a usage related charge which is recovered by suppliers through p/kWh charges to end-consumers as a part of their overall electricity bill.

The problem with this approach is that consumers who have their own generation are able to avoid paying these charges – although they are still able to make use of the network as and when they need to. This problem is expected to grow over time.

Ofgem are therefore proposing that these costs should instead be recovered through a standing charge (varying by region) of around £64 p.a., or £103 p.a. for Economy 7 customers.

While Ofgem’s concerns are valid, there are wider issues of fairness involved with such a restructuring which they don’t give adequate consideration to. Consumers who use more than average electricity will gain from such a move and consumers who use less will lose out. While there will be winners and losers across all socio-demographic groups, on average low-income customers use less energy and hence will pay more while those on high incomes will on average pay less, in some cases significantly less.

As a part of their proposals Ofgem would be rebalancing the contribution made by domestic customers compared to businesses which Ofgem estimate would lead to a gain to the median (typical) domestic customer of £8 p.a.

However, on top of this, our analysis shows that the move to a fixed charge rather than a usage charge would result in the average low-income customer (under £15000 p.a.) paying an extra £13 p.a. while high-income customers (over £70000 p.a.) would pay an average of £21 p.a. less.

There are then significant variations within these groups with 1 in 4 low-income customers seeing an increase of over £38 p.a. while the highest using 5% of high-income customers would gain by over £195 p.a.

Looking at this in terms of customer “archetypes” which look at other attributes beyond income it is clearly still low-income groups that would lose on average. Even low-income customers with electric heating who have higher than average consumption would not gain if they were to pay the higher Economy 7 standing charge.

In our view this is fundamentally unfair and inconsistent with Ofgem’s duty to have regard to the interests of those on low-incomes.

Ofgem’s alternative proposal of a “capacity charge” (in effect a three-tier fixed charge varying with usage) would in our view be significantly fairer as the highest users who are predominantly high-income would pay more. Only 18% of low-income customers would fall within Ofgem’s high use category while 44% of high-income customers would do so.

In addition, Ofgem should drop its proposal to treat Economy 7 customers as a separate group with an automatic higher standing charge. There is no logical basis for this and again it is primarily low-

income customers who lose out as a result. In any event with the rollout of smart meters Economy 7 will cease to exist as a separate meter type so this debate may well be moot.

Of course, even with these changes there will still be some low-income customers who will be worse off and Ofgem needs to do a fuller and more accessible assessment of the impacts, including working with BEIS to properly identify the impacts on fuel poverty. Ofgem and government should then identify mitigating actions such as changes to the Warm Home Discount or a reduced charge or exemption for certain vulnerable groups.

Finally, while Ofgem is a long way down the path on this aspect of its reforms of network charging there is a parallel stream of work that is looking at those elements of costs that vary with usage (what Ofgem calls its “Forward-looking charges” review). This will lead to further reforms to charging with either a greater emphasis on time-of-use charging or the introduction of some (potentially different) form of capacity charging. Given the importance of keeping charging simple for domestic customers and the difficulties in assessing the impacts of these changes without seeing the full picture, there is a very strong case for delaying any final decision on such a fundamental reform of network charging for domestic customers until the work on the “Forward-looking charges” is further developed.

This would also allow time for fuller engagement with consumers and consumer groups on a change that will ultimately have a bigger impact on customers’ bills than either the price cap or the RIIO price control and where issues of fairness need to be central to the debate.

1. Introduction

Ofgem has recently published its minded-to decision on the Targeted Charging Review, looking at some specific aspects of network charging and, in particular, what Ofgem terms the “residual” element of charges. This is an arcane topic and Ofgem’s document which runs to hundreds of pages is hard to follow for those not familiar with the area. However, the proposals will have very significant impacts on many customers’ bills and I have argued for some time that Ofgem should ensure that it is engaging consumers and consumer representatives fully in its deliberations. I have not seen evidence of them doing that and this paper therefore attempts to set out the issues from a domestic consumer perspective to help inform the debate.

It starts (Section 2) with an explanation of Ofgem’s proposals and then (Section 3) presents some analysis of the impacts of their proposal on different groups of customers by income level, showing that this proposal will on average benefit the rich with the poor paying more – albeit there will be winners and losers in both categories. It then (Section 4) considers the evidence that Ofgem presented on the distributional impacts of their policy proposal. Finally, (Section 5) it sets out conclusions and recommendations.

As the above makes clear, there are significant distributional impacts from these changes and as such the impacts on low-income households should be a central consideration in the policy proposals, which they are not. In an earlier paper I produced with the support of Oxford University (which can be found [here](#)) I explored some of the wider issues around network charging and in particular how trade-offs should be made between the different objectives of cost reflectivity, fairness and practicality. This paper builds on that earlier work.

2. Summary of Ofgem's Proposals

2.1 *The basics of network charging*

Network companies that own and operate the pipes and wires carrying gas and electricity to homes and businesses are monopolies. As such Ofgem regulates how much they can charge; these charges are reflected by suppliers in the end prices paid by consumers.

In essence, the total amount of revenue the network companies are allowed to recover is set by Ofgem through the RIIO (Revenue = Incentives + Innovation + Outputs) price-control arrangements. There are then a separate set of rules about who pays what out of this pre-agreed sum which is what "network-charging" is about. Ofgem's Targeted Charging Review is concerned with network charging in the electricity sector.

An important distinction to be drawn in network charging is then between those elements of costs that have a clear cost-driver and those that don't. The principle is that for those costs with a clear cost-driver, the charges should reflect this. That then provides a signal to users where their actions will give rise to changes in costs, at least in the long term. The economic argument is that this will ensure consumers only impose additional burdens on the network if the benefit to them as users is greater than the cost to the network and equally that consumers will not be put off using the network if they are not imposing additional costs. Ofgem refer to those costs where there is a cost driver as "forward-looking" costs (i.e. they will vary in future as consumers / users change their behaviour).

For the costs where there is no cost driver – in effect fixed costs - there needs to be some basis of allocation to allow network companies to recover their full revenue allowance under RIIO. Ofgem call this the "residual". As the table below shows, the residual accounts for around £3.5bn per annum (around 40% of network charges) – hence the significance of the issue.

2016/17 Charges (£bn)	Transmission	Distribution
Connection	0.2	0.2
Use of system - Forward-looking	0.5	4.0
- Residual / cost recovery	2.1	1.4
Total charges	2.8	5.6

Source: Charging Futures (2017) – Ofgem presentation

Ofgem have been looking at these two elements (the forward-looking costs and the residual) separately and, slightly perversely, started with the residual element. Their minded-to decision on how to deal with the residual element was published at the end of November with an initial consultation on their plan to look at particular aspects of forward-looking costs published three weeks later. This paper focuses on Ofgem's proposal for the residual element which form the main part of what it calls its Targeted Charging Review.

2.2 *The problem of how to allocate the residual*

While ostensibly a technical issue, the residual element at £3.5bn p.a. is significant and the question is effectively who should pay what towards those costs. Strictly speaking this is about the charges that networks recover from suppliers and generators but the assumption is that suppliers will then pass on any change in costs to their customers (and indeed with retail price controls in place now for many customers that flow through will be more automatic).

In looking at the residual there is no "right" way to allocate the costs. There is no cost driver. Instead, Ofgem set out three broad principles that they would follow – minimising distortions to the price

signals, fairness, and proportionality / practicality. These are uncontentious and largely mirror the factors that regulators across the world have proposed – although in some cases regulators also explicitly take wider policy considerations into account. The challenge is how you strike the balance between these principles and, for Ofgem, as an economic regulator, how it interprets “fairness”.

Ofgem’s primary concern in looking at the residual was the growing number of customers – domestic and non-domestic - with their own generation (e.g. solar panels) who were able to reduce their usage and hence what they paid towards network charges which are currently levied on a pence-per-kWh basis. In the case of the residual costs there was no saving to the system from customers using their own generation and hence these costs end up having to be paid for by everyone else. Given that those with their own generation tend to be businesses or the better off there were concerns that this was “unfair”. With growing levels of distributed generation, the concern was that this problem would only get worse in what was portrayed by some commentators internationally as a “death spiral” for the grid, with an ever diminishing number of (typically poorer) customers picking up the costs. Both BEIS and Ofgem have articulated a principle that anyone who makes use of the network should pay their fair share of the costs of the energy system. Specifically, one of the four new principles articulated by the Secretary of State, Greg Clarke, in November 2018 was that there should be no “free riders”.

This is a real issue, and together with the potential to also avoid the policy costs of Feed-In Tariffs (FITs), Warm Home Discount etc., places a real burden on customers who can’t afford their own generation – a burden that Ofgem sees as only going to grow.

2.3 Ofgem’s proposal

In Ofgem’s minded-to decision they propose two ways of addressing the issue – either to recover the residual costs as a fixed charge for all customers (its preferred option) or a form of capacity charge.

A capacity charge is like a fixed charge but the level depends on the maximum amount of electricity that the customer is able to use at any time. For large non-domestic customers this will be agreed as part of their contract (as the network operator will need to size the system accordingly). For domestic customers the capacity (in effect the fuse size) is standard and much higher than customers will typically ever need (and very short bursts of high usage at a domestic level aren’t a problem for the system). In its proposals Ofgem therefore uses an assumed (or deemed) capacity for domestic and small business customers which it considers better reflects the load that they place on the system. For domestic customers it proposes three different capacity levels for standard customers (covering 75% of customers), high users and EV/heat pump users, with different levels of fixed charge for each.

While our focus in this paper is on the effects of these proposals on different groups of domestic customers it is helpful as context to understand at a high level the full set of changes proposed which have a number of strands. The basic process of carving up the residual cost cake is done in a number of conceptual steps:

- First allocating the costs between suppliers (demand) and generators;
- Then allocating the supplier costs between broad customer groups;
- Then finally determining how much each individual customer in a group should pay.

Ofgem’s proposals for each step are summarised in turn below.

Suppliers v Generators: Ofgem are proposing to move to recover all costs from suppliers (i.e. linked to customer demand) rather than from a mix of suppliers and generators as at present. The basic reason for this is that generators’ decisions are most at risk of being distorted by the addition of these

residual costs. This aspect has implications for distributed generation but there are no short run impacts on domestic customer bills as Ofgem assume that the savings accruing to generators will effectively pass through to customers, offsetting the increase in supplier charges. They do, however, anticipate some small savings for consumers in the longer term (through to 2040) as a result of discouraging less efficient “behind the meter” generation. This aspect is not considered any further in this paper.

Broad customer categories: The supplier costs are then divided up between a number of broad customer groups (ordinary domestic, Economy 7 domestic, small non-domestic, medium non-domestic and large non-domestic). These are categories currently used by industry and are known as “Line Loss Factor Classes”. Ofgem has continued to use the same groups as are used at present for convenience rather than considering whether, for example, there is any case for Economy 7 customers to be treated differently from other domestic customers in this new world.

Ofgem proposes allocating the costs between these different customer groups on the basis of:

- Either total usage in the case of its proposal to introduce a fixed charge;
- Or total capacity in the case of its proposal for a capacity charge (but with the level of capacity “deemed” for domestic and small non-domestic customers).

The effect of this revised approach to allocation between broad customer groups would be to reduce slightly the share of the residual cost cake that domestic customers have to bear from 46.9% currently to 38.5% in the fixed cost model or 42.9% in the capacity charge model. Non-domestic customers would pay a correspondingly larger share (which they will no doubt be unhappy about).

According to Ofgem this would result in the median domestic customers saving around £8 p.a. for the fixed charge proposal.

In comparing its two options Ofgem notes that the use of an assumed (or “deemed”) capacity for domestic and small business customers means that the results for the capacity charge model are very sensitive to the level of deemed usage assumed. In Ofgem’s view this a downside for charging based on capacity.

Individual customer charges: Finally, having allocated costs between the broad customer groups, the way that Ofgem is proposing to allocate the costs to individual customers within those groups is either on the basis of a fixed charge that varies by-group or on the basis of a capacity charge as described above. It has ruled out continuing with the current usage-based allocation.

Because they are treated as a separate customer group, Economy 7 users would face a higher charge of £103 p.a. compared to £64 p.a. for ordinary domestic customers under the fixed charge option. In the capacity charge option, they would face a charge of £96 p.a., compared (again) to £64 p.a. for ordinary domestic customers.

2.4 The basis of Ofgem’s decision

The basis of Ofgem’s minded-to decision is then what they call a “principle-led assessment”, whereby they have broken down each principle (minimising distortion, fairness and practicality) into sub-categories which they then rate red, amber, green for each option. However, this policy-making by RAG rating needs to be treated cautiously – it all depends how many categories you use, how you weight them and indeed how you judge the RAG which is inherently subjective.

If you cut through the RAG rating Ofgem’s decision essentially boils down to:

- They intend to move away from a usage-based arrangement because that is distorting the cost reflective signals (i.e. Ofgem's over-riding concern is non-distortion);
- To address this, they propose using either a fixed charge or a capacity charge – anything else including hybrids would be too complicated (i.e. practicality is the next most important consideration);
- Between these two, capacity charges might be slightly fairer in terms of distributional impacts but is more complex and difficult.

The main concern with this policy by RAG rating approach is that by limiting the distributional impacts to being just one sub-category of fairness (along with simplicity, transparency, justifiability and predictability) it seemingly gets very little weight attached to it in reaching an overall decision. However, as the rest of this paper makes clear the distributional impacts are very significant and need more focus in Ofgem's thinking given its statutory duties to have regard to the interests of those on low-incomes – and the political imperative of so doing.

3. Understanding the distributional impacts

3.1 Overall approach, winners and losers

As a first step in analysing the distributional impacts across domestic customers it is important to understand how usage levels vary across the population.

The most comprehensive data source for this sort of analysis is the NEED data compiled by BEIS¹ which matches annual consumption data at an individual property level (provided by suppliers for all customers) with Experian data on incomes. The summary data tables which we have used are published (as “Consumption headline tables”) based on a sample of 4 million homes, but accredited researchers can actually access the anonymised data records which would allow further analysis to be undertaken if considered necessary.

Our analysis combines Economy 7 and single-rate customers – in part for expedience (given that NEED data does not distinguish Economy 7) and in part reflecting the policy approach we advocate.

We also focus purely on the impacts of moving from a usage based charge to a fixed charge. As noted above the overall impact of Ofgem’s proposal is to reduce the share of charges paid by domestic customers (which leads to a saving of £8 p.a. for the median customer). However, it would be perfectly possible to use a particular basis for allocation between customer groups but then explore alternative ways of allocating the costs between customers in those groups, with potentially different approaches for domestic and non-domestic customers (as now). Given Ofgem’s proposed basis of allocation between customer groups is actually usage for the fixed charge option, it is still theoretically possible to keep usage as the basis for allocation across domestic customers. Our analysis therefore focuses on this specific element of Ofgem’s decision (i.e. simply comparing the options of a fixed or usage-based charge for domestic customers keeping the overall share of costs borne by domestic customers constant).

When one is looking at converting what was a usage charge into a fixed charge, if the total revenue collected remains the same, as here, then the customer with the **mean** usage (i.e. total energy / total number of customers) will see no change in their charges. Any consumer using less than this amount will be left worse off financially from the change, whilst those using more than the average will be left paying less.

However, because the profile of usage is skewed by some very high usage customers, the median usage is actually lower than the mean. The **median** is the middle customer – what Ofgem use as their “typical” consumption. Due to the skewed distribution of how much energy consumers use (demonstrated in Figure 1), we can see that over 50% of consumers would be left worse off by the change. As the mean energy consumption for 2016 was 3900kWh, we can estimate that ~61% of consumers would lose out as a result of a move from a usage charge to a fixed charge. This figure is based on a linear extrapolation, and likely understates rather than overstates the percentage of consumers left worse off, given the apparent distribution of consumption. Overall more customers will lose as a result of the change than will gain, albeit they lose on average by a smaller amount.

Ofgem quote the median customer as gaining by £8 but this is a result of the rebalancing between domestic and non-domestic customers. If you just look at the impacts of the move from usage-related to a fixed charge within the domestic sector, then the impact on the median customer would be a

¹ <https://www.gov.uk/government/statistics/national-energy-efficiency-data-framework-need-report-summary-of-analysis-2018>

price increase of £11 (if the standing charge is £64 which is what Ofgem have modelled as the result for the North East, taken as a typical region).

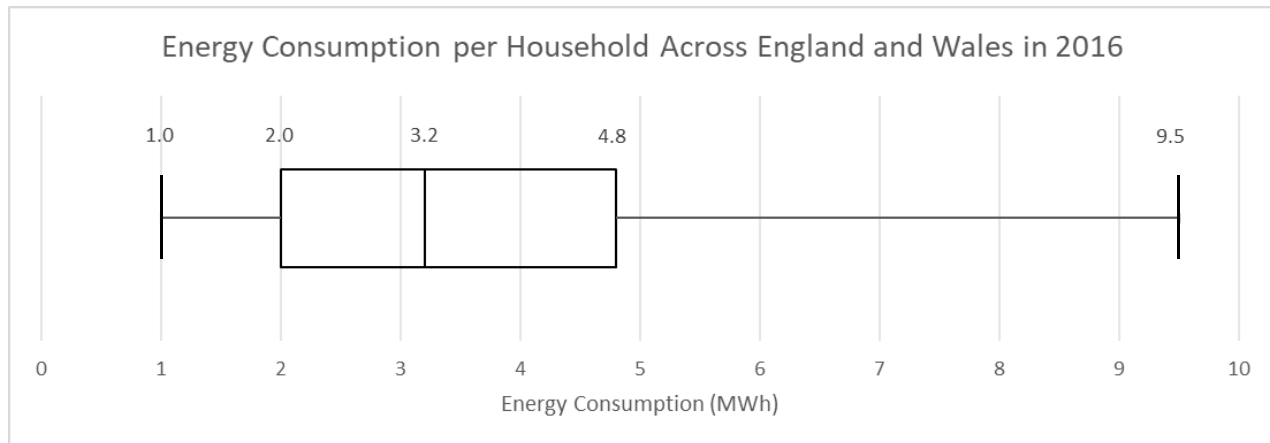


Figure 1 – Box Plot of energy consumption across England and Wales in 2016. Each data label represents (from left to right) the 5th percentile, lower quartile, median, upper quartile, and 95th percentile, respectively. Due to the volume of the sample and the fact that the upper and lower bound were unspecified in the data table, we used the 5th percentile and 95th percentile (rather than the lower and upper bound which is standard practice in these charts). This means that 10% of the population (5% at either end), amounting to around 3 million households, fall outside of this range. The mean for this dataset was 3.9MWh (i.e. 3900kWh) and the median, as shown in the diagram was 3.2MWh (i.e. 3200kWh).

The analysis above and throughout this paper is based for convenience on the England and Wales data. The data for Scotland (also available on NEED) shows a very similar pattern but with slightly higher consumption in all groups with a median of 3300kWh and a mean of 4100kWh.

3.2 Understanding the distributional Impacts – Economy 7 customers

As noted above, what Ofgem are proposing is to treat Economy 7 as a separate customer group, reflecting the current arrangements. As a result, Economy 7 customers would face a fixed charge of £103 p.a. against £64 p.a. for domestic customers generally (in the North-East).

This still represents a potential gain for those customers who use electricity to heat their homes and hence have significantly higher usage. Ofgem calculate that an upper quartile Economy 7 user (with consumption of 7100kWh) would see large savings of £60 p.a. for the fixed charge option and £64 p.a. for the capacity charge option.

However, it is not clear why Ofgem only look at the upper quartile user for Economy 7. According to Ofgem's Typical Domestic Consumption Values analysis, there are 4 million homes with Economy 7 meters with a median usage of 4200kWh², not so much higher than customers at large. One possible reason for this is that Economy 7 customers include many who do not actually have storage heating – Citizens Advice research put this at 80%³.

For a median Economy 7 customer, using Ofgem's figures it would appear that they would be £9 p.a. worse off assuming that their current unit rate – reflecting the mix of peak and off peak usage – is the

²<https://www.ofgem.gov.uk/publications-and-updates/typical-domestic-consumption-values-2017-decision-letter-0>

³

[https://www.citizensadvice.org.uk/Global/CitizensAdvice/Energy/False%20Economy%20\(LToU%20tariffs%20and%20restricted%20meters%20report\).pdf](https://www.citizensadvice.org.uk/Global/CitizensAdvice/Energy/False%20Economy%20(LToU%20tariffs%20and%20restricted%20meters%20report).pdf)

same as for an upper quartile customer⁴. This makes clear that the proposal is not such good news for Economy 7 customers as Ofgem suggest.

This is an important aspect of Ofgem's proposals given that, as Ofgem's own work⁵ on electric heated households shows, these customers more likely to be low-income:

"Households that use electric heating tend to be of lower income. In England, around a third have incomes of less than about £14,500. This combined with higher costs of heating, means these households are more likely to be fuel poor."

Ofgem have no reason for treating these customers as a separate group in this context other than that it is an existing categorisation used for other purposes. While they may have higher usage on average this is not a reason for charging them a higher fixed charge in Ofgem's new model. A clear (principle-based) recommendation would therefore be to treat them the same as other domestic electricity customers.

Doing so would help remove a significant distortion that currently exists at a whole-system level, whereby gas is much cheaper as a heating source. In terms of supporting the de-carbonisation of heat, modern electric storage heating has a potential role (in particular for smaller properties) and could be a valuable source of flexible demand, but currently appears more expensive than other solutions because these customers are bearing more than their fair share of policy and network residual costs.

Aside from these strong policy arguments, there is also a very strong practical point that, with the rollout of smart meters, Economy 7 will cease to exist as a separate meter type. SMETS meters with an auxiliary load control will provide the same functionality, but that same functionality will also be used to control heat pumps and electric vehicles.

There is thus no case for continuing with the Economy 7 distinction.

Clearly having a common standing charge including Economy 7 would result in a higher standing charge for the generality of domestic customers. On the basis that there are around 4 million Economy 7 customers the fixed charge would need to increase by around £5 p.a. if a common fixed charge were to be adopted across both groups.

3.3 Understanding the distributional impacts – low-income customers

In its distributional analysis, Ofgem tried to look at the impacts on vulnerable customers and concluded that there were winners and losers within any sub-demographic group and by implication that its proposals were broadly neutral.

However, what it failed to draw out was the systematic relationship that exists whereby customers on low-incomes on average use less energy. This has been well understood by consumer groups over many years and has led, for example, to consistent opposition to standing charges⁶ and campaigns for

⁴ Calculating their previous usage based charge as $4100 \times (103+60)/7100 = £94$ compared to the proposed fixed charge of £103

⁵

https://www.ofgem.gov.uk/sites/default/files/docs/insights_paper_on_households_with_electric_and_other_n_on-gas_heating_1.pdf

⁶ <https://www.theguardian.com/money/2013/sep/02/ofgem-tariff-reform>

the calculation of obligations such as ECO on the basis of suppliers' energy volumes rather than customer numbers.

This is clearly shown by the data. Median energy consumption increases with average household income, as shown in Figure 2, and as a result those with lower household income are more likely to be negatively impacted, while the wealthiest in society will be most likely to benefit from the changes.

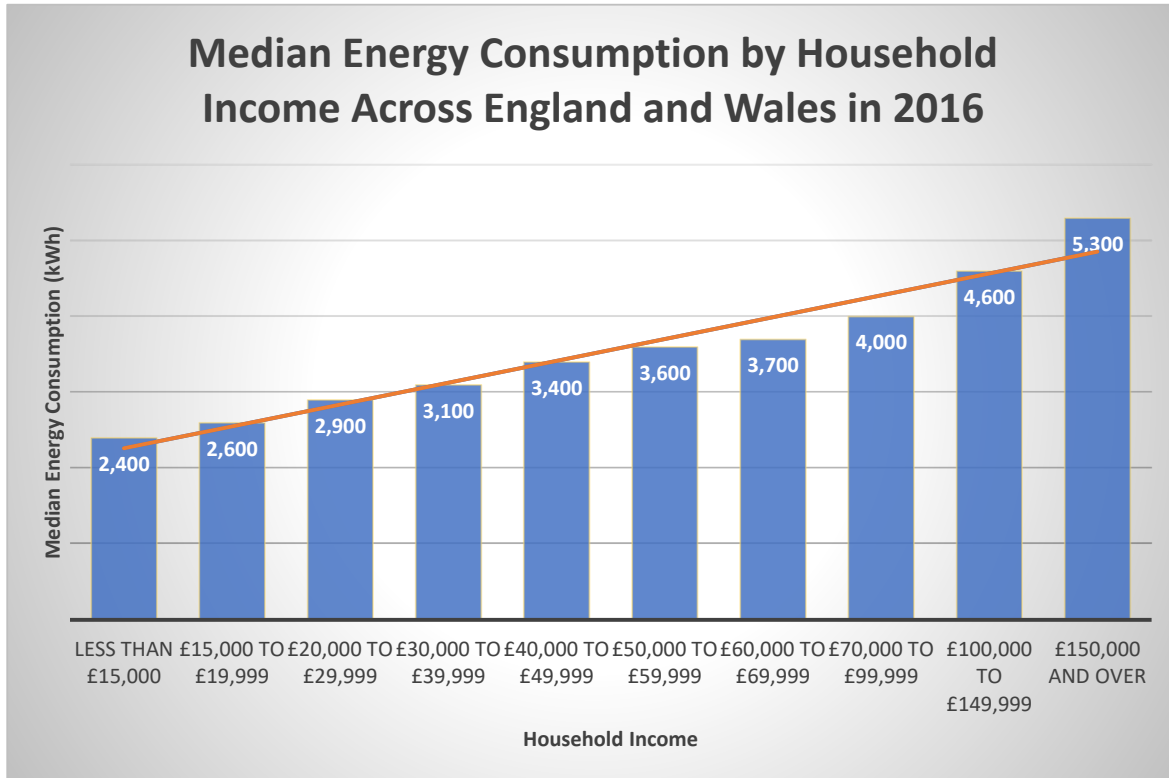


Figure 2 – Median Energy Consumption by Household Income for England and Wales in 2016. Each median value is consistently greater than that of the previous household income. This is highlighted by the trend line shown in red.

	2016										
Household income	Number in sample	Percentage of sample	Electricity consumption (kWh)								
			Mean	Standard Deviation	5th percentile	10th percentile	Lower quartile	Median	Upper quartile	90th percentile	95th percentile
All dwellings	4,111,300	100	3,900	2,900	1,000	1,300	2,000	3,200	4,800	7,200	9,500
Less than £15,000	614,200	15	3,100	2,600	800	1,100	1,600	2,400	3,800	6,000	8,000
£15,000 to £19,999	331,310	8	3,400	2,700	800	1,100	1,700	2,600	4,100	6,400	8,600
£20,000 to £29,999	846,550	21	3,500	2,700	900	1,200	1,900	2,900	4,300	6,500	8,700
£30,000 to £39,999	728,120	18	3,800	2,800	1,000	1,400	2,100	3,100	4,600	6,900	9,000
£40,000 to £49,999	560,290	14	4,100	2,800	1,100	1,600	2,300	3,400	5,000	7,200	9,300
£50,000 to £59,999	332,530	8	4,300	2,900	1,200	1,700	2,500	3,600	5,200	7,500	9,700
£60,000 to £69,999	207,990	5	4,400	3,000	1,300	1,700	2,600	3,700	5,400	7,800	10,200
£70,000 to £99,999	291,850	7	4,800	3,200	1,400	1,800	2,700	4,000	5,800	8,500	10,900
£100,000 to £149,999	138,000	3	5,500	3,700	1,600	2,100	3,200	4,600	6,800	10,000	12,900
£150,000 and over	50,880	1	6,500	4,400	1,700	2,300	3,500	5,300	8,200	12,400	15,800
Unknown ⁵	9,590	-	7,500	6,100	1,000	1,500	2,900	5,400	10,400	17,500	20,700

Source: NEED, Experian

1. Sample sizes have been rounded to the nearest 10 and consumption to the nearest 100 kWh.
2. Household information based on modelled data from Experian.
3. Only households with valid electricity consumption between 100 and 25,000 kWh have been included.
4. Households with suspected estimated electricity consumption readings have been excluded.
5. Experian data for household income has been purchased for all properties in England and Wales. All the data in this table is based on Experian's household income 2011 variable.

Figure 3 – 2016 NEED data used in analysis, based on supplier data on usage with data on income provided by Experian. Data from 'Unknown' category was not used in this analysis.

Figure 3 sets out the summary data table taken from NEED which shows clearly how for low-income customers the pattern is one of lower usage at all points across the distribution.

With an upper quartile value of 3800 kWh, at least 75% of the lowest earning households (i.e. the bottom 15% of earners) would see their energy bill go up as a result of the change to a fixed charge, while less than 50% of households in the top three earning categories would see a rise (these categories constitute the top 11% of earners). Inevitably there are exceptions, with more than 10% of the poorest consumers still benefitting from the scheme (putting aside the Economy 7 question), and at least 25% of the wealthiest consumers paying a higher bill. However, for the majority of consumers the trend is obvious: the lower your household income, the more likely you are to be negatively impacted by the scheme, and vice-versa.

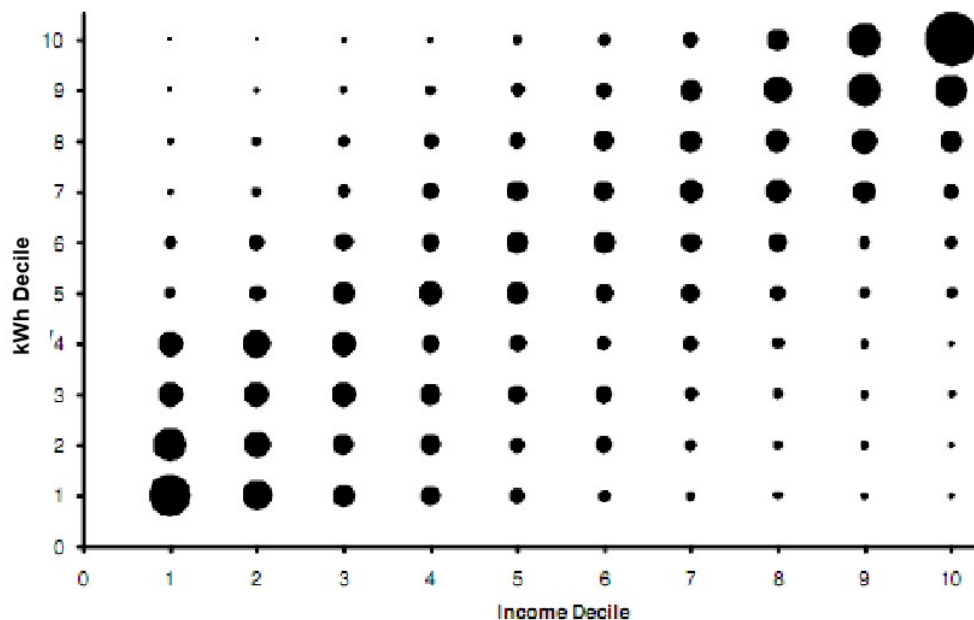


Figure 4 – Distribution of energy consumption decile by income decile (CSE, 2010) The size of the blobs reflects the number of households in each group.

As noted above, this is a well-established relationship. The same pattern is shown in analysis done by CSE for Ofgem⁷ in 2010 using the Food and Expenditure survey, displayed in Figure 4.

The question then becomes how significant the price increase would be for those whose consumption is below the average. Assuming, again, that the scheme is designed to be financially neutral for the network companies, the significance of the price increase would be wholly determined by the level of the standing charge itself. Using the energy consumption values for England and Wales in 2016, and assuming that the annual standing charge would be £64, the median consumer would face a price increase of £11.48 as a result of a shift from usage related charges to a standing charge. Using these assumptions, the median consumer in the lowest earning category would face price increases of £24.61, and one in four households in this category would experience a price increase of £37.74 or more. Though these figures may seem relatively insignificant it does mean that one-in-four of the

⁷ <https://www.ofgem.gov.uk/ofgem-publications/57558/high-use-low-income-energy-consumersfinal-report-nov-10-pdf>

poorest households in England and Wales would see a rise in annual energy costs equivalent to over 13% of one week's earnings.

The proposal becomes all the more concerning when you take into account that one in twenty of the top earners would see a huge decrease in their energy bill of £195.20 or more. Given that the losers are most likely to already be in a strained financial situation, putting them under greater financial strain in a move that at its core most benefits the wealthy is inconsistent with Ofgem's principal objective to protect consumers, having regard in particular to those on low incomes.

The table below (Figure 5) shows the impact of the move to a standing charge by usage level and by income. Because the data covers all customers including Economy 7 (which under Ofgem's proposal would have a £40 higher standing charge) it actually overstates the benefits to low-income high users which is where the majority of Economy 7 customers could be found. Conversely, the lower consuming higher income customers who see an increase can be expected to include consumers with solar PV, reflecting Ofgem's ambition for them to pay a fair share of the costs.

Household income	2016										
	Number in sample	Percentage of sample	Change in Annual Energy Bill (£)								
			Mean	Standard Deviation	5th percentile	10th percentile	Lower quartile	Median	Upper quartile	90th percentile	95th percentile
All dwellings	4,111,300	100	0	16	48	43	31	11	-15	-54	-92
Less than £15,000	614,200	15	13	21	51	46	38	25	2	-34	-67
£15,000 to £19,999	331,310	8	8	20	51	46	36	21	-3	-41	-77
£20,000 to £29,999	846,550	21	7	20	49	44	33	16	-7	-43	-79
£30,000 to £39,999	728,120	18	2	18	48	41	30	13	-11	-49	-84
£40,000 to £49,999	560,290	14	-3	18	46	38	26	8	-18	-54	-89
£50,000 to £59,999	332,530	8	-7	16	44	36	23	5	-21	-59	-95
£60,000 to £69,999	207,990	5	-8	15	43	36	21	3	-25	-64	-103
£70,000 to £99,999	291,850	7	-15	11	41	34	20	-2	-31	-75	-115
£100,000 to £149,999	138,000	3	-26	3	38	30	11	-11	-48	-100	-148
£150,000 and over	50,880	1	-43	-8	36	26	7	-23	-71	-139	-195

Figure 5 – Table of theoretical changes in energy bill by income group for England and Wales assuming a £64 standing charge. This highlights the significance the change could have, with the wealthiest receiving massive cuts, and some of the poorest facing significantly higher costs.

Recognising that there are wide differences in consumption within income groups Ofgem previously commissioned the Centre for Sustainable Energy to develop customer archetypes⁸ which could be used to explore distributional impacts of different policy options. This research used advanced statistical techniques to identify groups of consumers with similar consumption patterns. These were then described in terms of short “pen portraits” to help Ofgem understand the impacts of policies on different types of customer.

The issue of the distributional impact of the proposed change is reinforced when examining the impact for these different archetypes (Figure 6). The table highlights that the negative impacts are mostly focussed on low-income groups - with the average customer seeing an increase in their bill in all but one low-income archetype which is electrically heated homes (and even there the result depends on whether they use Economy 7 or not). Out-of-work single adults are the worst off of any group while wealthy working families in large detached houses are the biggest gainers. When viewed in % terms the impact is even more marked because the losers are those with lower bills to start with so a smaller absolute increase corresponds to a higher proportionate increase. It is worth noting that the figures used for these estimations are somewhat out-of-date (the data used in the CSE study was from 2014), and that commissioning similar work with more recent data could be beneficial to the understanding of distributional impacts on this project and more widely.

⁸ <https://www.ofgem.gov.uk/ofgem-publications/88202/cse14beyondaverageconsumptionreporttoofgemmarch2014update-pdf>

Archetype Group	%	Estimated Annual Price Change - £	% Annual Price Change
Low-income electrically-heated	4%	-37 (2)*	-3.4% (0.2%)*
All other electrically-heated	7%	-82 (-43)*	-5.3% (-2.8%)*
Low-income non-metered fuel-heated	2%	8	1.3%
All other non-metered fuel-heated	4%	-15	-1.7%
Low income, out-of-work single adults in small 1-bed social rented flats (London)	4%	29	6.5%
Young working adults in rented flats (London)	4%	17	3.1%
Low-income single adults (lone parents or elderly) in social rented houses	5%	21	4.0%
Younger working families in medium-sized rented houses	11%	7	1.0%
Average' mains gas-heated households	33%	5	0.8%
Wealthy working families in 3-4 bed semi's owned with mortgage	9%	-11	-1.3%
Asset-rich, 'empty-nesters' in detached houses in less urban areas	10%	-3	-0.4%
Wealthy working families in larger detached houses in less urban areas	6%	-23	-2.4%

*Values in brackets are estimated values for a higher standing charge of £103 for Economy 7 customers

Figure 6 – Table showing the change in energy bill in £ and percentage for the average (mean) customer in different archetype groups - as defined by the Centre for Sustainable Energy (CSE). Percentage change based on SVT tariff cap electricity bill for relevant usage level.

It is worth noting that due to the range of consumption values across different income groups (shown in Figure 3), there would be a number of customers within these groups whose bills would be affected even more significantly. The distribution of estimated percentage changes in energy bill versus annual consumption is shown in Figure 7 below. For example, a customer using 1200kWh of electricity or less would see an increase in their bill of 16% or more – this would be the case for 10% of customers in the lowest three earning categories (with household income of less than £30,000 p.a.).

When examining the distributional impacts, it is important to remember that customers with extremely low consumption do exist, and that these customers must be taken into account, particularly as the majority of these customers are already in a vulnerable position financially.

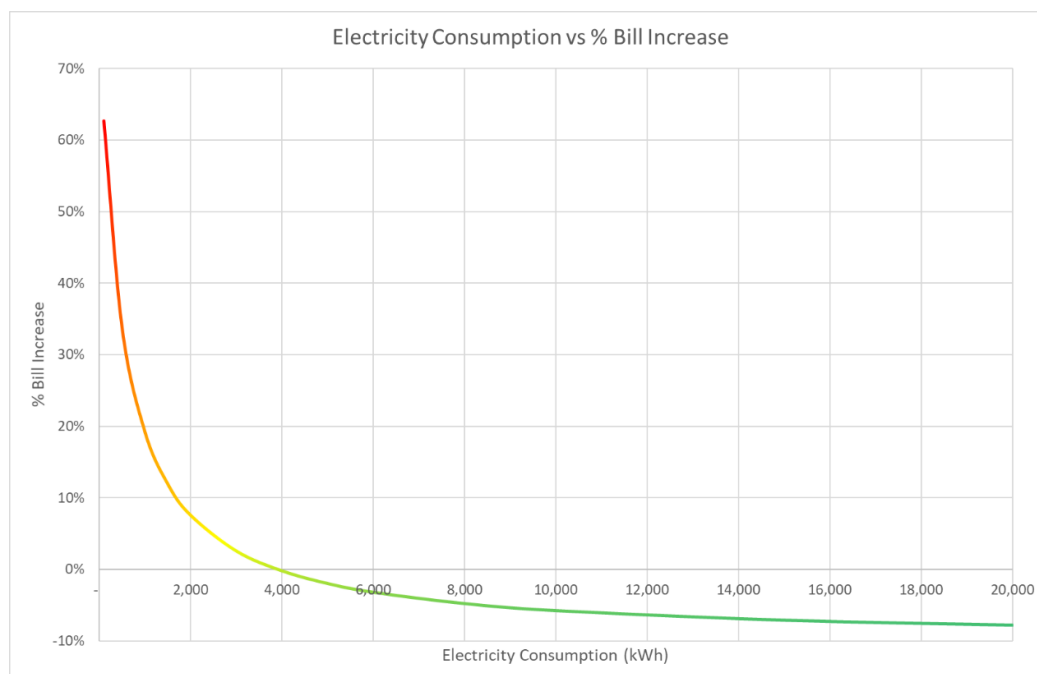


Figure 7 – Graph showing the distribution of % bill increase for different annual electricity consumption. These projections are based on non-Economy 7 tariffs.

3.4 Mitigation and interplay with other changes

If Ofgem decides to proceed with these changes then it should look more seriously at how best to mitigate the impacts on those on low incomes. One option would be to increase the current Warm Home Discount (WHD) payable to certain categories of low-income customers. Obviously the WHD only covers a certain group of low-income customers (primarily pensioners on pension credit but also some low-income families). However, adjusting the WHD to compensate for the shift to fixed charges would be one potential option. More sophisticated analysis than has been possible here would be needed to understand how WHD would need to change to offset the shift but is something that Ofgem and BEIS should be capable of. Ofgem does suggest this as a possible mitigation but suggests it should only be a transitional measure which does not make sense given the impacts on low-income customers would be enduring.

Alternatively, Ofgem could actually set the fixed charge at a lower level for customers on WHD (or, for example, they could be exempt from higher rate charges under the capacity charge model). While Ofgem may see this as outside their remit, if the changes they are proposing adversely affect this group of customers then arguably it is for them not for government to decide the mitigation. A reasonable principle would be that any change should not increase bills for those on WHD and Ofgem could then set the fixed charge accordingly.

The difference between these two approaches is essentially who is in the lead as between BEIS and Ofgem. What is important is that responsibility is clear.

Other options that have been floated as fairer solutions include linking to council tax bands or an additional fixed charge for being able to export. Some of the practical issues around council tax bands and the WHD option are set out in an Annex to this paper.

The key message to Ofgem is that it should be looking for options that are more inherently fair even if slightly harder to implement given the scale of impacts identified above.

There is also a strong case with domestic customers for deferring any major structural change until the work on forward-looking charges is further advanced to ensure that the overall structure of tariffs is coherent. As part of the forward-looking charging review Ofgem is still considering options such as some form of capacity charge which could be the same as, or different to that proposed here. There is a very strong logic in trying to align the charging structures to avoid having a proliferation of different elements of charges, in particular for domestic customers.

The scale of the standing charge could also change significantly in some regions (noting that for example the distribution residual charge is currently negative in London reflecting potential problems with the current model). The scale of the charge is important in judging the impact of any change on those on low-incomes.

Finally, no mention is made in the consultation of the rollout of smart meters and the additional functionality available (such as load limitation) that might open up new opportunities for charging structures that are currently impractical.

While Ofgem is concerned to address what it sees as a major distortion in terms of the impact of customer owned generation, the scale of the issue in the domestic sector is still relatively small. There is not therefore the same urgency to address the distortion in this sector and there is time to phase in any changes for domestic customers.

3.5 The alternative model - a capacity charge

The alternative option, proposed by Ofgem, is to split domestic consumers into three categories – regular users, high-energy users and EV/ heat pump users – and to charge a different standing charge for each, designed, once again, to be financially neutral. This would likely work by categorising high-energy consumers as being those who fall within the upper quartile, leaving the lowest 75% of energy users as ‘regular’ users.

Again this will have similar impacts, with those using below the mean amount of energy in their category paying more than under usage-based charging and those using above the mean amount paying less. However, as the distribution of usage is more symmetrical in the lower 75% of users (see Figure 1), it can be assumed that a lower number of users in this category would end up worse-off as a result of the change, and that the degree to which they would be left worse off would also decrease. It also addresses the problem of very high gains that were noted above for high-income high users.

As Ofgem note there is always a problem with having a step change in charges at a random cut-off. It would mean that users at the bottom-end of the upper quartile would be left worse off at the expense of the extreme high-energy users. This would also encourage consumers to use an amount of energy below the upper quartile threshold, as crossing the threshold would lead to a possibly quite significant increase in their standing charge. One solution to this would be a hybrid solution of a fixed charge with an additional usage-related charge above a certain threshold. This is an option that Ofgem has floated but rejected as being too complex but could usefully be revisited in the context of domestic customers (where the “deemed” charge is anyway an artificial construct). This sort of model has been advocated in the past as one that is seen as fairer if the standing charge is seen as entitling customers to a certain level of consumption (reflecting essential usage) at a lower unit rate.

4. Ofgem's distributional analysis

4.1 Overall approach

Ofgem has put a lot of emphasis in recent years on its vulnerability strategy, stressing the need to think about "customers in vulnerable circumstances" and to take a more nuanced approach than simply focussing on categories such as low-income or elderly. This is right when one is talking about company behaviour and identifying where extra help may be needed. However, where the focus is on big changes to charges the people who will be most impacted are clearly those on low-incomes and that should be Ofgem's focus.

As the figures above show, customers on low-incomes use less energy on average. But despite that, they actually spend a higher proportion of their incomes on energy as the Ofgem quote below taken from Ofgem's proposal for a safeguard tariff⁹ acknowledges:

"The impact of high energy prices is greater on poorer consumers, and the situation has got worse. In 2015, the poorest 10 per cent of households spent an average of 9.7% of their income on energy, compared to 5.8% of their income in 2005. Over the same period, the proportion of income that the richest 10% of households spend on energy was much lower, and changed less (2.1% in 2005 and 2.8% in 2015). One consequence of the poorest consumers paying high prices is that they can under-heat their properties in winter, which can harm their health and social well-being. Low-income is therefore a particularly important risk factor when considering the impact of high-priced tariffs on consumers."

Ofgem in looking at a wide range of different measures of vulnerability in this context is rather missing the point. Having said that its own analysis looking at Acorn groups does paint a broadly similar picture with areas of high affluence and low levels of vulnerability showing markedly higher average consumption than areas of low affluence / high vulnerability, notwithstanding that there is considerable variation within each group.

Ofgem also does not make any reference to the difficulties with the data sources that it relies on in its assessment of these impacts. In the CEPA report¹⁰ for Ofgem (on the distributional impacts of half-hourly settlement) they rightly point out that:

"ACORN is the segmentation of residential neighbourhoods in the UK. It classifies each postcode in the country into one of 6 categories, 17 groups and 62 types, and gives a detailed socio-economic profile of each area. A household level version is also available which makes that classification for each household, but the anonymised EDRP data is classified at postcode ACORN level. The smaller LCL dataset uses household ACORN, and thus provides more precise sociodemographic information. But in practice we have to use these datasets alongside each other so the relative imprecision of the EDRP sociodemographic information pervades much of what we are able to say."

Where granular time-of-use data is required (e.g. to look at the impacts of time of use tariffs) then there is a paucity of suitable data for modelling. This is a problem which the Sustainability First / CSE Public Interest Advisory Group (PIAG) on smart meter data¹¹ (of which Ofgem is a sponsor) is seeking

⁹ https://www.ofgem.gov.uk/system/files/docs/2017/10/financial_protections_for_vulnerable_consumers_-_technical_document.pdf

¹⁰ https://www.ofgem.gov.uk/system/files/docs/2017/07/distributional_impact_of_time_of_use_tariffs_1.pdf

¹¹ <http://www.sustainabilityfirst.org.uk/index.php/public-interest-advisory-group>

to address. However, where all that is needed, as here, is total annual consumption, then the NEED dataset provides a much larger and more robust dataset than those used by Ofgem, and one where the mapping of individual household usage onto socio-demographic data is done ahead of any postcode-level aggregation. Equally the CSE archetypes were commissioned by Ofgem precisely to support this sort of analysis and to help paint a richer picture. With the significant changes happening in the sector which have the potential to have significant distributional issues it is important that Ofgem builds its skills and analytical capabilities in how to assess such changes, and understands the strengths and weaknesses of the different data sources available.

4.2 Ofgem's distributional analysis - Fuel poverty

The other angle that Ofgem attempt to look at is the impact on fuel poverty. However, all they do is observe that the median consumption for customers in fuel poverty (in England and Wales) at 3100kWh (using the NEED data we use above) is the same as the figure they have for the population as a whole. On this basis, Ofgem argue that the median fuel poor customer will benefit by the same average £8 p.a. They also pull out the example of a high-using customer in fuel poverty to show how some fuel poor customers will benefit.

This analysis is flawed in a number of ways:

- Firstly, they are comparing data from different sources. In the NEED data the median consumption across England and Wales is (as used above) 3200kWh (not 3100kWh) reflecting the fact that, among other things, in this dataset Economy 7 users are included.
- More generally, it misses the point that fuel poverty is essentially about the cost of heating and hence the fuel poverty impacts of this change will be predominantly to do with how it impacts customers with electric heating which in turn depends on how Economy 7 is treated.
- More importantly the English fuel poverty measure is a relative measure (and reliant on modelled heating costs to strip out the effects of under-heating). This makes it inherently complex to determine the impact of policies on the metric. The Committee on Fuel Poverty in its response to Ofgem's last annual plan¹² advocated that Ofgem should work with BEIS to model the impacts on fuel poverty of its decisions but Ofgem do not appear to have done so in this case.
- In its latest report, noting that it is a relative measure, BEIS explain that actions likely to increase numbers in fuel poverty are those that disproportionately increase costs for those on low-incomes which this proposal does.
- A further feature of the fuel poverty definition is that BEIS look at both the number of people in fuel poverty and the depth of fuel poverty. Both need to be considered in looking at the impact of any policy on fuel poverty.
- Finally, it is essential to remember that Scotland has a different definition of fuel poverty and much higher levels. As noted above, consumption levels in Scotland tend to be higher (so the impacts of a move to a fixed charge will be more positive) but given the scale of fuel poverty in Scotland – and the high numbers of electric heated homes - the impacts should be properly modelled.

¹²[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/751687/2018 - 02 - 13 CFP response to Ofgem Forward Work Programme consultation.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/751687/2018_-_02_-_13_CFP_response_to_Ofgem_Forward_Work_Programme_consultation.pdf)

4.3 Ofgem's distributional analysis – EVs and heat pumps

Ofgem's alternative proposal for a capacity charge would see EV and heat pump owners facing a higher charge (along with other high users). Ofgem make some heroic assumptions to imply that this would be at best neutral from a distributional impact perspective and potentially harmful:

- On EVs they assume that all demographics will ultimately take up electric vehicles (as conventional vehicles are phased out). This ignores the fact that currently in the lowest income quintile 44% of households do not own a car compared to 24% overall¹³. Moreover, higher income groups can be expected to replace their cars more frequently and hence are more likely to move to EVs sooner.
- On heat pumps Ofgem note that a number of local authorities are looking at this as a solution to fuel poverty and imply one should therefore be cautious about increasing charges for this group. While this is true it still remains the case that the majority of heat pumps are likely to be installed by better off households who can afford the up-front costs – and who have the outside space and room for a hot water tank that the system requires.

Of course there is a wider question as to whether it might be viewed as unfair to penalise those who are contributing to the de-carbonisation of heat and transport and increases in charges may end up having to be offset by higher government subsidies in the early days at least. In both cases the extent to which energy costs are seen as fair by those playing a part in the de-carbonisation of transport and heat is likely to be impacted at least as much by Ofgem's approach to forward-looking costs, given that both will impose additional costs on the system. This highlights again the problems of taking the two work-streams forward separately.

4.4 Distributional impacts - Ofgem's stakeholder and consumer research

Ofgem have put considerable effort into stakeholder engagement around their work on network charging with the establishment of the Targeting Charging Forum with a strong secretariat support from National Grid and a dedicated website. However, this engagement has been focussed on industry stakeholders and no effort has been made to engage directly with consumer or fuel poverty groups who have limited resources and are only interested in a specific subset of the issues.

Ofgem have used their Consumer First Panel to explore some of the ideas and, in particular, the relative merits of equity versus equality which had been identified by academics as key dimensions of "fairness". Inevitably, even though the Consumer First panel have some understanding of the sector they found these concepts difficult to grasp and reportedly largely supported whichever model they thought would benefit them most.

Given the significance of these changes for consumer bills it is important that the consumer voice features strongly in any decision. However, to get effective contributions on issues like this Ofgem needs to revisit the approach that it takes to consumer research. In its report on best practice Consumer Engagement in RIIO¹⁴, Citizens Advice talk about the use of deliberative methods which allow more time for expert input and explanation on complex issues such as this. Ofgem should explore such methods as a way to get consumer input to decisions like this.

¹³ <https://www.gov.uk/government/statistical-data-sets/nts07-car-ownership-and-access>

¹⁴

https://www.citizensadvice.org.uk/Global/CitizensAdvice/Energy/CitA_Strengthen%20Consumer%20Voice%20in%20Energy%20Networks%20Price%20control_2018.pdf

4.5 Regional impacts

Ofgem provides a summary in the main document of how the impacts of its proposals would vary by region. It notes that the extent of the residual varies by region and hence the impact will also vary. What it does not present clearly is how the standing charge itself would actually vary by region. The Frontier distributional analysis does include some analysis (split down by distribution and transmission) but it is hard to reconcile to the data in the main consultation. Based on these figures our calculation is that the charges could vary between £40 p.a. in London and £80+ p.a. in the North of Scotland.

In looking at the regional impacts Ofgem do not appear to take account of different profiles of usage by region (which could in principle be assessed through NEED).

As Ofgem will be aware the regional dimension of charging has been a sensitive issue given the higher charges in some DNO areas, in particular in Scotland and Wales. In 2015 Ofgem produced a report¹⁵ looking in depth at the issue and concluded that there was no regulatory case for moving to socialise charges and that there were strong arguments in terms of cost reflectivity for keeping a regional based charge. The conclusion was therefore that any change would be a decision for Government.

While it is understandable that Ofgem may not wish to re-open this issue the introduction of standing charges that vary materially by region will draw attention to the issue. In particular, since the focus is on charges which are explicitly not cost-reflective the arguments for having different charges by region is less strong. Of course, such re-distributional questions probably still sit best with government – though one could readily argue that the same applies to the rebalancing between rich and poor which a move to a standing charge entails.

The key point is that regional variations will be seen as part of the “fairness” debate and Ofgem should be more transparent about what the changes would mean for different nations and regions.

4.6 Wider considerations

Implications for wider government policy on energy efficiency and flexibility

Moving from a usage-based charging structure to a fixed or capacity charge will blunt the signals sent to customers to manage their usage. Ofgem’s response from a pure economic perspective would presumably be that what it is moving to is to send a cost-reflective signal to customers and that otherwise customers are being over-incentivised to reduce consumption or shift loads away from the peak.

While most domestic customers do not currently pay time-of-use charges, Ofgem recognises the need to move in that direction as reflected in its joint work with BEIS on a Smart Flexible Energy System. Its proposals for “market wide” half-hourly settlement would mean (absent the current reforms) that domestic customers would start to face the same red-amber-green time of use charges that many non-domestic customers do now (or at least that suppliers would face those charges and would have to decide whether to reflect them in the prices they charge end customers). The move to a fixed charge further blunts these charges following the changes introduced from 1 April last year (DCP228) which changed the residual from being allocated as a proportionate mark-up to one that was a fixed per kWh mark-up. As highlighted in my work with the Smart Fintry community energy

¹⁵https://www.ofgem.gov.uk/sites/default/files/docs/2015/10/reg_charges_final_master_version_23_october_2015.pdf

project¹⁶ this change reduced the longer term opportunities for local energy projects seeking to balance local supply and demand, and for demand side response (DSR) more generally.

Although Ofgem is visibly concerned about over-rewarding such changes in energy usage, arguably the bigger problem is a lack of engagement by customers in the energy system and how to overcome the inertia that exists to encourage take-up of time-of-use tariffs and demand-side-response. While automation is seen by many people as the key to this, in the nearer term, and for those who cannot afford the technology, encouraging behavioural responses will almost certainly remain an important aspect of the energy transition. Even where automation is possible, domestic and small business customers will be looking for short paybacks on investment (higher than government discount rates) so pricing is still key.

There are therefore a number of what might be seen as market failures that Ofgem could use the residual charge to address. However, its proposals move us in the opposite direction.

There is a crucial question, that Ofgem does not engage with, as to what impact its proposals will have on incentives for energy efficiency and demand-side-response in particular at the domestic level.

Inevitably this ties in closely with the way that Ofgem is planning to reform the forward-looking costs – which might or might not strengthen the available signals - and highlights again the problem of forming a definitive view on the residual charges without being able to see the whole picture.

Finally, while at a commercial scale there are good reasons for Ofgem to worry about the distortions caused by the ability to avoid network charges through self-generation, it is less clear where the “fairness” arguments fall in the domestic sector. As noted above, there are distributional issues here with low-income customers (without generation) having to pick up an increasing share of network costs. However, consumers who have done “the right thing” and invested in solar panels may feel that it is not fair that they are now being penalised. Currently there are around 1 million homes (c. 3% of the population) with solar panels and hence the extent of that fairness issue compared to the significant distributional impacts caused by introduction of a standing charge needs to be properly considered from an evidential (rather than ideological) point of view. With the recent changes to FITs it is unclear whether this is really a growing problem – but assuming it is then sending the right signals to those considering installation of solar PV in the future is important. However, the aim should be to do this without creating further and different unfairness.

In its articulation of the principles that it is following Ofgem talks about minimising “harmful” distortions. It is not clear how it has decided which of the distortions are harmful and which might actually deliver wider benefits or help address other market failures.

¹⁶ <http://smartfintry.org.uk/about-smart-fintry/resources/>

5. Conclusions and recommendations

It is vital that Ofgem recognises the very significant and adverse distributional impacts that are inherent to its proposal to change the allocation of residual charges. It started out by establishing “fairness” as one of the principles that it would judge these decisions by, but it has not properly considered the impacts of its proposals on customers on low incomes and whether any alternatives (even if more complex) could have addressed its primary concern in a way that would have less damaging effects. Options could involve a link to council tax bands, a discount for customers on certain benefits (e.g. WHD recipients) or a hybrid measure with a fixed charge and a supplementary usage charge above a certain level. These should be properly assessed.

Consumer and fuel poverty groups have a long history of understanding the distributional impacts of policies and Ofgem should ensure that it taps into that expertise (and that in BEIS) to produce a more robust and transparent assessment of the impacts of its proposals on low-income customers.

If Ofgem insists on going down one of the two paths proposed, then of the two options presented the capacity charge model would seem to be preferable in terms of distributional impacts. However, several important changes should be made to the approach proposed by Ofgem before any final decision can be taken:

- The critical element would be to combine ordinary domestic and Economy 7 as a single category to help address the punitive charging that such users currently face and where there is no logical basis for separation;
- The second point is that, for domestic customers at least, it really is important to look at the basis for allocating the residual in parallel with any reforms to the forward-looking element of costs. If that work-stream concludes that a capacity charge is the appropriate basis for charging, then any practical considerations in relation to the introduction of a capacity charge for the residual would be overcome. If they opt for a different structure, then thought would need to be given to the complexity of having multiple different elements of charges. Equally, the work on forward-looking charges will impact the level of the residual and hence the scale of the impacts set out here;
- Finally, an assessment should be undertaken of the potential mitigations for those on low incomes seeing increases in their bills, for example through increases in the Warm Home Discount.

BEIS have also signalled that they intend to revisit the basis of recovering policy costs to avoid the “free rider” problem. It is vital that they too take account of the evidence presented here on how best to examine the distributional impacts of any reforms.

Annex: Use of Council Tax Bands or Benefits Entitlement as a Basis for Setting Charges

Property values

The idea of linking the recovery of fixed charges to some measure of property value has academic support having been proposed by MIT and endorsed by colleagues at Oxford University when I was developing my earlier paper. The reason is that, as a measure that is unrelated to energy consumption, it has no distortive effects (at least not on energy usage) and is seen as more progressive in terms of its social impacts than a simple fixed charge.

Water rates (for unmetered customers) continue to be linked to the rateable values of property reflecting that principle and the New Policy Institute (NPI), a think tank, has argued previously in favour of using council tax bands for recovery of fixed charges in a range of sectors¹⁷ as well as making the case for reform of the current arrangements¹⁸.

Inevitably council tax bands are themselves far from perfect and consumer groups generally have not warmed to the idea of using them to recover residual charges in energy.

The main objections to the use of council tax bands are that they are out of date (though not as much as rateable values are) and there are big regional disparities reflecting differences in property values across the country. Thus in the North-East 75% of properties are in council tax band A/B while in London less than 20% are (based on NPI data).

However, because the charges would be set on a regional (DNO) basis, this would not necessarily be an issue – the charge for a Band-B property in the North-East would simply be higher than for a Band-B property in London, for example.

What this then highlights though is the challenge of determining what the ratio should be for the charges between bands and whether, for example, bands should be grouped together. Given there is no cost basis for this model of charging the question of what is fair becomes even more a matter of judgment and beyond what might be reasonable to expect Ofgem to determine. However, clearly the same multipliers could be used as are applied currently across council tax bands (and which are uniform across the country).

Thus while there are not really any practical obstacles to such a proposal – contrary to what Ofgem say, the data could be obtained if needed – it would be politically difficult and is unlikely to attract broad support given the wider negative views around council tax. As a means of collecting local authority revenues it is clearly regressive. Nonetheless it would seem to be a more progressive basis for recovering the residual charge in energy than a uniform fixed charge.

Benefits

If the concern is to find a more progressive basis for levying what is in essence a tax then the obvious alternative is to link discounts or exemptions to the receipt of certain benefits. Again there will always be debates as to which categories of benefits recipients should be included in such a scheme but that debate has in effect already been settled in energy by the fact that Government (as an elected body) has set out what it considers appropriate in terms of eligibility for the Warm Home Discount (WHD).

¹⁷ https://www.npi.org.uk/files/2513/7570/2418/water_a5_1.pdf

¹⁸ https://www.npi.org.uk/files/7013/7544/1030/council_tax.pdf

One clear option would be for Ofgem to accept the principle that on average customers on the WHD should be no worse off as a result of this change and to set a lower fixed charge for these customers to achieve that. This would require Ofgem (or Government) to collect information from suppliers on the consumption levels of these customers but that should be possible and would contribute to improved policy making more generally going forwards. Arrangements would also be needed to settle up between network operators and suppliers (given network operators do not have access to WHD records) but there are precedents for this. Given that Ofgem had independently proposed extending the PPM tariff cap to cover WHD customers (before the government intervened with the broader cap for customers on a standard variable tariff), there is precedent for Ofgem looking to protect this group of customers. Simply having a price cap in place does nothing to protect this group if – as here – the underlying costs are increased in a way that impacts them disproportionately (and would need to be reflected in an increase in the cap). Clearly the other way this could be handled would be for government to increase the Warm Home Discount to offset any increase in the average bill for these customers. Again this would need information to be collected to enable the impacts to be assessed.

The key difference between these two is where lead responsibility sits which needs to be clear and agreed between BEIS and Ofgem.

Clearly further work would need to be done to explore the practicalities of any of these options but given the significance of the issue they should not be dismissed lightly on grounds of practicality.