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To: costreview@ofgem.gov.uk

Energy System Cost Allocation and Recovery Review – Ofgem Call for Input

Dear Ofgem,

Sustainability First is a long-standing charity and think tank focused on social and environmental issues in the energy and water sectors with a record of engagement on approaches to policy and regulation.

We have worked on the related topics of energy industry cost allocations, industry charges and potential implications for retail tariffs over many years with several major Sustainability First projects examining particular aspects. We have also served as members of the earlier government / Ofgem Smart Grids Forum, Ofgem's Strategic Advisory Board for market-wide half-hourly settlement and Ofgem's RIIO-2 Challenge Group.

We very much welcome Ofgem's decision to conduct this fundamental review. With significant changes in industry costs as the energy system decarbonises, we agree that a review is timely and that the focus must be on questions of consumer affordability. To command public support the energy transition must be fair – and be seen to be so. Questions of how going forward energy system costs are best funded, recovered and paid-for are central – especially given so much new investment. The overwhelming public response to the initial standing charge consultation shows the strength of feeling around this particular aspect.

Given the importance of these issues, we were somewhat disappointed in the framing of this initial Ofgem Call for Input (CfI). We have therefore set out below our thoughts on how Ofgem can best progress what is a complex and multi-faceted review – with wide stakeholder interest - but where there will be a lot of learning from past work that Ofgem can draw on. We then set out in headline terms our views, based on our own past work, of what we think the future priorities should be for cost allocation and recovery and, based on that, our preferred structures. Finally in Appendix 1 we look to answer the specific questions that Ofgem has raised.

Framing of the Call for Input and the Review and Next Steps

i) Clarifying the scope and aims of the review

Given the complex set of inter-related issues that the review potentially touches on, it would have been helpful for Ofgem to start by framing the review in a more systematic and focused way. The Appendix sets out clearly the different cost elements that make up an energy bill but in the document itself it is unclear if all of these are in scope as different options for cost recovery are discussed. The CfI seems to look at the options primarily through the lens of retail tariffs but

it is then unclear what is being assumed in terms of the future of the retail price cap or default tariff structures, which are key to how any re-modelled charges might be passed through. We would encourage **Ofgem to now step back and set out clear aims and expected outputs of this review, including what is in and out of scope.**

As a part of this we would urge Ofgem to:

- **Distinguish between the structure of the input network costs, network charges and their allocation** – which we had understood to be the main focus of this review - **and thereafter how these charges may subsequently** be reflected in retail prices and tariffs and ultimately in customer bills. A glossary of these terms might be a helpful aid to clarity;
- **Make a clearer distinction between gas and electricity costs and charges** - and any subsequent consideration of gas and electricity retail tariffs (where future cost drivers are very different);
- In the discussion of future retail tariffs for households, **set out more clearly the assumptions around the future of the price cap and the longer-term implications for continued retail competition and / or mandation of particular tariff structures.** Some tariffs such as ToU or block tariffs do not work effectively on an opt-in basis as only those customers who stand to gain will opt in. Also, in places the CfI talks about the impact of particular structures on supplier margins but this is presumably only an issue if there is a misalignment between the underlying structure of charges and the price cap.

ii) **Systematically reviewing the existing evidence**

Most of these issues on cost-allocation and cost-recovery are in fact not new for Ofgem. **Ofgem themselves should take the time to look back at - and then build upon - the very substantial body of existing evidence and analysis already undertaken on these topics** - by Ofgem themselves and by government – and which the CfI largely overlooks. These include, among others: Ofgem's Targeted Charging Review, Ofgem's Access and Forward-Looking Charges SCR (and the ongoing DUOS SCR), Ofgem's approach to assessing distributional impacts, Ofgem's extensive assessments of the consumer impacts of Half-Hourly Settlement, repeated Ofgem and government consultations on the future of retail markets, flexibility and customer safeguards, projects in the DESNZ Alternative Energy Innovation Markets Programme, the DESNZ consultation on future default tariffs, and Ofgem's earlier consultation on standing charges.

We see a particular need to take account of the imminent move to market-wide half hourly settlement for electricity (not discussed in the CfI). This is firstly in terms of clarifying how MWHHS will directly impact distribution charges – presumably enabling the current RAG time bands to be applied to domestic customers' actual consumption profile. Secondly there are clear lessons from all the preparatory work that was done exploring expectations on how these half-hourly charges might pass-through as sharper behavioural incentives in the design of electricity retail tariffs, the implications for the price cap and the major distributional questions which different retail tariff designs may imply.

Given the strong emphasis on affordability there must also be interplays with the long-running debate around social tariffs on which there are a number of reports and reviews by a range of stakeholders – and government's Review of the Fuel Poverty Strategy.

A systematic review by Ofgem of relevant material would have helped everyone in ensuring that this review started from a properly informed base-line, and would have enabled Ofgem to identify significant gaps in analysis or evidence – or where there were clearly divergent views - and to set out more focussed question-areas for stakeholder input. **We hope that this will now be a priority output from the Call for Input.**

From a consumer and customer standpoint, many third-sector stakeholders have a major interest in the outcomes of this review, but have only limited resource. Ofgem can help such stakeholders by reviewing and clearly setting out**:**

- **The very substantial body of work relevant to this topic already undertaken** by Ofgem, DESNZ / DECC, consultants, the energy networks (including customer / tax-payer funded innovation projects) – and distilling the main lessons for this review.
- **The very extensive work at EU level** - enshrined in the EU Electricity Regulation (updated 2024, 2019) on electricity market design and the draft EC guidelines (July 2025) on future-proof network charges for reduced energy system costs. Also the systematic reviews done by ACER on current trends across NRAs.
- **Some basic numbers on the current costs and charges**. While Ofgem asserts in general terms that the majority of network costs are recovered through standing charges, this does not appear to tally with information from the NESO Charging Futures Forum[1] which shows that, for 25/26, on distribution charges (which are currently still the majority of network costs), "residual" costs only account for 8% and the standing charge element is 2p/day, (albeit upto 20p/day in some areas). In contrast, on transmission, "residual" costs account for 75% and the standing charge is 14p/day. Having a clear view on the starting position and trends over time must be key to an informed debate. The CfI currently lacks baseline numbers to help stakeholders get a clear view of today's balance between household and I&C consumption, and the current allocation of charges (including for policy costs and policy-cost exemptions).

iii) **Establishing a process of structured engagement**

Building on this consolidated evidence base, we would then urge Ofgem to consider how it will manage a process of **structured engagement, with the full range of stakeholders,** to take forward thinking for this review. The right answers to these complex and challenging trade-offs will not come from detailed modelling (any more than it did on REMA). As an independent voice focused on balancing social, environmental and economic considerations we would be very happy to discuss our thinking bilaterally with Ofgem or as part of a more structured process of engagement.

In particular we would see **the development of a clear set of principles** as a way of framing the debate with stakeholders, which would then help in balancing the complex trade-offs noted in the CfI discussion of its draft assessment criteria. As an example, Ofgem might look across to how the EU Electricity Regulation (Article 18)[2] is informed by relevant and carefully considered principles, primarily around cost reflectivity. The DESNZ consultation on default tariffs included

[1] https://www.neso.energy/document/363086/download

[2] Regulation 2019/943 - here

principles that have some read across to this review. Such principles can be especially important in informing what customer and consumer fairness might look like over time[3].

This process of structured engagement should also **provide assurance that Ofgem and DESNZ are working closely together on these complex issues** of industry cost allocation and retail tariffs. This is crucial given the wider political importance and sensitivity. This goes to the heart of choices between whether to use taxation or customer bills to fund certain aspects of the energy system; to the role of social tariffs; to choices around rebalancing policy costs (not referenced in the CfI) and whether any principles adopted would inform government thinking more generally on recovery of environmental / social policy costs (i.e cost recovery of FITs, RO, CfDs ECO and GGL – and any future levies to recover costs of nuclear or hydrogen, for example).

Our views on the criteria for cost allocation and recovery

Sustainability First has been heavily involved in thinking around these issues over many years. Our 2019 "*What is Fair?"* paper[4] sought to frame the challenges in linking the underlying cost structures, the charges paid by suppliers and ultimately the retail tariffs paid by customers – and provides evidence and insights across the range of issues raised in Ofgem's Call for Input. This paper built on an earlier paper by Associate Maxine Frerk with Oxford University which looked at the history and theory around network charging and at the specific engineering and economic issues related to distribution network charging[5]. Since then, we have continued to reflect on these issues and have responded to numerous consultations explicitly on these themes (and others that are closely related) as listed in Annex 2.

Based on our work to date, our views on the criteria and tradeoffs that Ofgem highlights are that:

We continue to support an approach to charging that is broadly cost reflective (as articulated in the EU Regulation). However, there will still be choices to be made around the level of temporal and locational granularity and around how long-run marginal costs (linked to eg network reinforcement) are best reflected in a charging structure. The other factors that Ofgem highlights such as fairness, practicality and net zero can help inform those choices.

Energy affordability should be the key consideration in terms of fairness In looking at different options for charging structures, Ofgem should be carrying out a distributional impact assessment but needs much better data to do this robustly (as we saw in REMA). Energy is an essential service and every household must have access to an appropriate level of affordable energy, both today and tomorrow, regardless of means.

Net zero is vitally important but support to encourage individual customers to take up LCTs risks favouring those who are better off. We noted this tension in relation to Ofgem's decision under the Access SCR where domestic connection costs were moved to being shallow (ie customers were not responsible for reinforcement costs higher up the network). While this may

[3] For example, DESNZ recognised the need in their REMA consultations with their REMA end-user panel, together with Citizens Advice and Sustainability First, to address what principles for fairness in REMA might look like - https://sustainabilityfirst.org.uk/wp-content/uploads/2023/11/End_User_Forum_1_-_16_Feb_2023_-_DESNZ_Readout_-_Fairness.pdf

[4] What is Fair? How should we pay for the energy system of tomorrow? - here

[5] https://www.renewableenergy.ox.ac.uk/wp-content/uploads/oxford-network-charging-190818.pdf

have been justified (in terms of avoiding "first comer" problems) it was clearly supporting EV owners, who will typically be higher income, with the costs being born by customers at large, including those on low incomes[6]. Ofgem should think particularly carefully about the distributional impacts of such decisions aimed at supporting individual LCT take-up.

On the "**practicality**" of options, there is a need, we would argue, for potentially quite radical reform and hence **Ofgem should not rule out options that might require significant changes** in industry systems and take time to implement. However, we would also **emphasise the importance of robust and transparent solutions** which avoid undue complexity (vis the REMA locational pricing debates). Current network charges appear to be quite volatile and there is a strong argument for setting charges on a basis that is "broadly right" rather than risking being "precisely wrong".

Over time with better data and increased automation what is deemed practical (for industry and consumers) might change. Ofgem should be thinking about the long-term pathway it wants charging to take but then identifying practical next steps.

Our view on the options for different charging / tariff structures

Linking charges explicitly to ability to pay should be explored but is likely to be difficult: One model Ofgem suggest is that energy system fixed costs could be allocated and recovered based on a proxy for wealth or income. For fixed costs (ie where there is no direct cost driver) there is no right economic answer for how they should be allocated. Given the importance of energy affordability, the idea of linking to income or wealth should be explored – and was an idea we floated in our work on the targeted charging review[7]. However, as the CfI notes, the challenge here is the practical one of identifying a robust and effective 'gateway' for setting charges, which is justifiable and fair. Household income as defined by the benefits system can vary from week to week. Council tax bands (or rateable value as used in water for unmetered properties[8]) are widely seen as problematic. That said, these options need to be considered against the alternative of a "one size fits all" standing charge which is also unpopular. Ultimately a mandated social tariff could be better targeted with the more detailed data that government holds and with the additional legitimacy of government backing. However, we have seen no real progress on that and hence welcome Ofgem looking at what it can do within its powers.

On gas, **the future challenges are not yet well-captured in the CfI and are around inter-generational fairness and recovering disconnection costs.** For example, there is extensive discussion in the GD3 process about Ofgem's accelerated depreciation policy in terms of what fair might look like for customers regarding the recovery of costs for historic and new gas assets. Looking ahead to future decarbonisation of the gas system, gas cost-recovery and allocation presents a significant set of fairness issues, yet to be resolved, given a declining customer base and the need to safely maintain all of the gas distribution network until every customer has

[6] We note that among the bottom quintile of households 40% do not currently have access to a car compared to only 12% in the top two quintiles (ref government statistics – here). As well as being slower to take up EVs, because of the up-front cost, low-income households are also less likely to ever own one.
[7] See the annex to the Grid Edge Policy report - here
[8] https://www.citizensadvice.org.uk/consumer/water/paying-your-water-bill/paying-for-water-without-a-meter/

come off that segment. Moreover, many questions arise as to how the costs of individual customer 'safety' disconnections should be recovered – whether continuing to be socialised among existing customers (as now) or recovered differently in a future with gas disconnections at scale. We have discussed these matters in depth in our work on the Future of Gas Networks[9].

Of the options presented in the CfI we see **a potential role for rising block tariffs for gas but with concerns around complexity.** Today's gas network charges are treated for cost-recovery as volumetric and in practice are not recovered via the standing charge, which is positive in terms of affordability. A rising block tariff (achieved by allocating certain costs against usage above a threshold level) could build on this and ensure a basic level of affordable heat for all (depending on how the base block is priced) and also encourage energy efficiency among larger consumers (noting that there is no carbon price in domestic gas). However, it is important to stress that any block tariff approach entails complex calculations and distributional judgements on 'fairness' in the detailed design. There are also concerns around how to make this transparent and easy to understand for retail customers. **Approaches to cost-recovery which involve either time of use or capacity charges are not relevant to household gas consumption.**

On electricity, we see potential for household capacity charges to address recovery of system peak capacity-related costs (for generation – in terms of CfD and capacity market costs – as well as transmission and distribution network investment). In our view this would reflect the driver of the very significant investment that is needed (in both generation and networks). In terms of affordability it also provides a form of rough justice as higher income households will typically have higher peak demand. This is a common approach across Europe (sometimes in combination with other charges) and there are already banded capacity charges in place for network charges for non-domestic customers in GB.

That said, **the concept of capacity charges needs further unpacking**. Typically, across the EU, a capacity charge (kW related) will be related to either the physical capacity provided (effectively the "fuse size") or to the contractual terms – with different options around what happens when that capacity is exceeded (either in terms of supply tripping or additional charges / penalties being imposed). Customers can be seen as taking a decision in advance about the "size of the wire" that they want into their property. The introduction of "access rights" for small users was rejected during the Access SCR (largely on practicality grounds) but might sensibly be revisited in the light of experience from other countries and with greater clarity now around future growth in distribution network investment.

In contrast, and as seems to be the case with the pilot that Ofgem is running, capacity can be judged ex post as effectively the maximum demand at system peak time or the customer's own maximum demand, assessed over some pre-defined period. Triad was an attempt previously to define capacity by looking at (large) customers' demand in what turned out to be (ex post) the three distinct half-hours with the highest system demand over the winter period. There are obvious problems with an ex post arrangement which is dependent on customers / suppliers forecasting when the peak will be. Ofgem's pilot should shed some light on how customers view this as an alternative to a standing charge and whether it is more or less effective in driving

[9] Looking through the FOG – the Future of Gas Networks – here. Also our response to Ofgem consultations on gas disconnections (here) and RIIO GD3 Draft Determinations (here)

customer behaviour than a peak ToU tariff. Understanding which of these alternative views of capacity best reflects the underlying cost drivers will also be important.

We **do not see a role for electricity block tariffs** - whether falling or rising. Either static or dynamic ToU kWh charges are likely to better reflect underlying industry costs than simple volumetric charges or block tariffs. We also believe it would be difficult to combine block tariffs with ToU. There are already basic ToU network charges (with RAG time bands in distribution for example) – but these do not flow through into domestic bills because, until MWHHS, the charges are based on a standard domestic profile.

On **electricity transmission**, we would argue that the pendulum has swung too far towards standing charges **with 75% of costs currently being viewed as fixed**. With a view to the very significant investment envisaged **we would encourage Ofgem to look again at whether the cost allocation rules are genuinely reflecting the long-term cost drivers**.

On **electricity distribution there is a need for a much better understanding of the cost drivers which are not about aggregate system peak demand but about local peak demand and linked to diversity of load.** A time of use price signal (linked to wholesale prices) which resulted in all EVs starting to charge at 1am could cause significant challenges for the distribution network where EV penetration is likely to be locally concentrated. As advocated by Prof Joskow at MIT[10], drawing on learning from the EU, we see **a strong case for a move to household capacity charges for distribution charges** as this reflects the underlying cost drivers and, as noted above, provides a rough justice around affordability. Further work is needed to understand the appropriate level of geographic granularity. We are aware of debate around **dynamic DUOS which we see as having theoretical benefits but where the complexity involved means we would not support it as a near term solution** for distribution charges. There is also continuing uncertainty around the role of flexibility in the distribution networks and the subsequent question of whether that is delivered primarily through procured services (which makes sense to us) or through time of use charging.

Last, as noted above, **any detailed consideration of how changing cost allocations feeds through into future retail tariffs for households, must also address the longer-term implications for the price cap and for continued retail competition.** Tariffs such as ToU or block tariffs may eventually require at least an element of basic mandation given that most customers will otherwise opt for tariffs that are most likely to maximise their personal benefit. This creates a risk for certain customer groups of having to meet the additional peak-related system costs that they themselves have not created (eg created by EV users). In our response to the DESNZ consultation on Future Default Tariffs[11] we therefore supported the introduction of a default EV ToU tariff. We also said that we could foresee a time where an eventual universal electricity default ToU tariff (kWh) may make sense but that in the near term, for most customers, there still needs to be a single rate default tariff, as now[12].

More generally, and as explored in numerous consultations on the future of the retail market, there is a tension between enabling a range of innovative tariffs by suppliers (which should help

[10] See refs in response to Q1

[11] https://sustainabilityfirst.org.uk/wp-content/uploads/2024/04/Sustainability_First_-_Future_Default_Tariffs_-_DESNZ_CfE_-_final_220424.pdf

[12] We also argued for an enduring Economy default tariffs for the c1 million Economy 7 customers with storage heating.

spark interest and engagement) while ensuring that the market does not become too complex and that consumers are able to assess and be confident in the choices they make. If the focus is to be on encouraging competition then there is no guarantee that any changes to cost allocation will ultimately be reflected in retail tariffs.

We hope these reflections are helpful and reiterate our offer to discuss further if that would be helpful.

Yours faithfully,

Maxine Frerk and Judith Ward

Associates.
Sustainability First

Annex 1: Responses to Ofgem questions

Question 1: What other examples or evidence from relevant sectors or international energy markets should we consider as part of our review?

As noted in our cover letter we would encourage Ofgem to systematically review evidence presented as part of its own and DESNZ's past work on these questions, including the range of consultations to which we have responded as set out in Annex 2.

In terms of international experience, we would highlight in particular the extensive work done at EU level exploring these issues, including the articulation of a clear set of principles which should be equally relevant in the UK context and which are captured in an EU Regulation. Key resources which we have identified are:

European Commission "Approval of the content of a draft Commission Notice on Guidelines on future proof network charges for reduced energy system costs" (2025)

https://commission.europa.eu/document/download/8d72a3c3-fdd2-4aca-88ae-730147ba82e5_en?filename=C_2025_4010_1_EN_annexe_acte_autonome_cp_part1_v4.pdf

ACER Review of practice across EU member states (2025)

https://www.acer.europa.eu/sites/default/files/documents/Publications/2025-ACER-Electricity-Network-Tariff-Practices.pdf

We would also point to the work of Prof Joskow of MIT who presented at the IAEE Conference in Paris on the theme of "The Economics of Distribution Networks Deserves Much More Attention as the Decarbonization Transition Proceeds".[13] His research provides a sound theoretical basis for thinking about distribution network charging and also provides another helpful summary of the lessons from the EU around capacity charging.

Joskow general paper on network charging

https://eta-publications.lbl.gov/sites/default/files/2025-01/electricity_rate_designs_for_large_loads_evolving_practices_and_opportunities_final.pdf

Turk, G., T. Schittekatte, P.D. Martinez, P.L. Joskow, and R. Schmalensee (2024), "Designing Distribution Network Tariffs Under Increased Residential End-User Electrification: Can the US Learn Something from Europe?" MIT Center for Energy and Environmental Policy Research, Working Paper 2024-2, January.

https://ceepr.mit.edu/wp-content/uploads/2024/01/MIT-CEEPR-WP-2024-02.pdf

The article below references proposals in California to link standing charges to incomes. Our understanding is that this proposal has now been withdrawn but that there will still be a lower

[13] See Maxine Frerk's Linkedin commentary - https://www.linkedin.com/pulse/distribution-network-charging-why-matters-maxine-frerk-2j19e/

standing charge for low-income customers already signed up for rate support.[14] The learnings from California would be worth exploring further.

https://www.canarymedia.com/articles/utilities/california-regulator-takes-income-based-electric-bills-off-the-table

While we encourage Ofgem to look carefully at learning from all these examples it is important to understand the industry structure in different markets which impacts on how lessons transfer across. In particular, in markets that remain at least partially vertically integrated, (with eg combined networks and suppliers), the same questions do not arise about how network charges get passed through into end user tariffs. In some cases also network tariffs are separately charged (or at least shown separately on the bill) which again will impact on how learning should be carried across. It might be interesting as a part of this to test whether there are benefits from separating out the network charges, in terms of customer response.

The central role of the price cap is another distinguishing feature of the GB market which may affect how lessons read across.

Question 2: What options for amending domestic cost allocation and recovery should we explore in more detail and why? What options should we rule out at this stage and why?

We set out our view on the preferred options in our covering letter but provide some additional comments below.

On **rebalancing standing charges and unit rates**: This must be examined more closely. While other options (such as capacity charges) are preferable they may take time to implement and in the interim, rebalancing could be an important step.

On **standing charges that reflect income or wealth**: we would encourage Ofgem to look at whether there are practical options – perhaps linked to existing mechanisms such as Warm Homes Discount. Clearly this needs to be done in close consultation with DESNZ. It would make sense to rule this in or out on practicality grounds sooner rather than later. However, we would stress that no solution is perfect and hence concerns about eg income being a poor indicator of affordability (as flagged in the FT) should not rule it out automatically.

On **rising block tariffs (RBTs)**: we could encourage Ofgem to look at these as an option **for gas** as providing a fairer solution enabling affordable access to a basic level of heat, provided they can be made transparent for customers. We would not support their use for electricity where time of use is probably more important and also because of challenges around complexity if block tariffs are applied in combination with other structures. There is an argument that as heat becomes electrified, a low cost essential level of electricity could be of value (as we argue it is for gas) – and may allow people to feel they are getting something for their standing charge /

[14] https://www.canarymedia.com/articles/utilities/california-regulator-takes-income-based-electric-bills-off-the-table

capacity charge. Prof Dieter Helm in his Cost of Energy Review[15] argued that policy costs / residual charges could be recovered from suppliers on the basis of usage above an essential level, in combination with a capacity charge. This has some merit in terms of fairness but would require further thought on how it would work in combination with charges aimed at encouraging flexibility and shifting demand from peak times.

We would also point to an earlier Ofgem report back in 2009 which sets out some of the issues with rising block tariffs in a competitive retail market.
https://www.ofgem.gov.uk/sites/default/files/docs/2009/07/final-discussion-paper-22-july.pdf

On **falling block tariffs**: we see these as essentially a way of providing a "no standing charge" retail tariff when the underlying cost structure (inc network charges) includes a standing charge. This would still leave suppliers exposed to some risk and is a complex message for customers. While the Call for Input refers to Ofgem having banned RBTs in 2013 (which is the example given in RMR Final Proposals that Ofgem cites), the actual concern at the time was that suppliers were using two tier tariffs to get round the fact that standing charges were unpopular. This led to customer confusion and poor decisions (with eg a wide range of different thresholds and relative rates)[16]. We can see no case for considering this as an option for structuring network charges.

On **Time of Use** charging: This absolutely needs to be explored as a part of the mix for **electricity**. At this stage we favour a model of static TOU charges but Ofgem will no doubt be encouraged to look at dynamic DUOS[17] but we see this as too complex at this stage in the wider market development. A recent innovation project involving UKPN and Octopus (Shift 2.0 – here) demonstrates the complexities involved as, for example, the network needs to forecast the load on its system a day ahead which in turn depends on the algorithms used by aggregators to charge EVs in the face of different wholesale prices. Procuring flexibility services may be a better way for distribution networks to deal with their more targeted requirements in terms of time and location.

On **capacity**: Again this absolutely needs to be explored as a part of the mix for **electricity** and has been our preferred option over a number of years. However, the Call for Input does not begin to touch on the range of different ways that capacity might be defined (as set out more fully in our cover letter): fixed, ex ante contractual – including variants on what happens if the contractual level is exceeded and whether there are time variants, ex post time of use with options around the period over which maximum demand is measured, system peak or customer peak etc. These variants are discussed in some detail in the ACER report and in Turk et al (referenced in response to Q1). The commonest approach at EU level would appear to be a contracted subscription for a particular level of capacity which has the merit of simplicity (albeit a new model for GB at household level). Within that there are also variants around time differentiated capacity limits. We would support this model as an ex ante rather than ex post approach (which helps avoid unexpected bill shocks) but believe further work is needed to

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[15] https://assets.publishing.service.gov.uk/media/5a749c26ed915d0e8e39997a/Cost_of_Energy_Review.pdf (para 38)

[16] See, for example, https://www.thisismoney.co.uk/money/bills/article-1714094/Are-two-tier-energy-bills-ripping-you-off.html

[17] Discussed by, for example, FTI in an EU context – here. However wider EU work (see Q1) concludes that, while theoretically appealing, they are too complex in practice.

understand the different options and their implications. The Norwegian regulator introduced household capacity charges to address the costs associated with rapid wide-spread EV uptake by households and there may be lessons to be learned from their experience[18].

On **location**: Again, this is really only an issue for **electricity**. There is much that can be learned from the REMA process around attitudes to locational price signals. Given customers are unlikely to re-relocate on the basis of electricity charges and given the fairness concerns around a "postcode lottery", significant locational variations can only be justified if there are very different behavioural price signals that need to be sent in different areas. Electricity charges have always varied by DNO area which broadly reflects the differences in serving those areas and, notwithstanding the principle suggested above, there seems little reason to move away from that approach[19]. Whether distribution charges might reasonably vary at a more granular local level is a question that merits exploring but would require a better understanding of how load profiles vary across the network and different cost drivers depending on the demand and generation mix in the area. One reason for supporting the procurement of flexibility services at distribution level over driving flexibility through price signals is that in the near term it is probably easier to focus the procurement around substations where there are particular constraints, for example, without needing retail tariffs to vary at a granular geographic level.

One option not mentioned in the Call for Input is around the treatment of **community energy**. With the introduction of P442 and the ongoing discussions around P441 there is a move towards excluding community energy from the need to pay certain policy costs and potentially network charges. While there are good arguments for supporting community energy (and allowing it to benefit from the same benefits as individual customers with behind the meter assets), the costs will have to be picked up by other customers and there are risks around how the new rules might be abused (and the reliance on exempt supply which leaves consumers without protections). This might usefully be considered more strategically as a part of this review.

Another option not mentioned relates to **export**. We have previously suggested that there should be a standing charge linked to the right to export which would help address concerns about customers with PV avoiding paying their fair share of network and policy costs (which was a historic reason for increases in standing charges). Given the additional complexity that DSOs have to deal with relating to how flows can vary across the network, the level of export may also be a cost driver in some areas.

Question 3: How would changes to the underlying rules and approaches for allocating and recovering system-wide costs be expected to translate into the tariffs offered by suppliers?

This question has been raised previously in the context of half-hourly settlement and as part of the DESNZ work on default tariffs. It was also a theme of our "What is Fair?" paper feeding into work on the future of retail markets. As flagged in our cover letter we believe strongly that Ofgem should look at the evidence gathered as a part of those projects to inform this review.

[18] See for example this academic commentary

[19] As concluded last time Ofgem explored the issue – Regional Differences in Network Charges (2015) https://www.ofgem.gov.uk/sites/default/files/docs/2015/10/reg_charges_final_master_version_23_october_2015.pdf

In a competitive market suppliers will ultimately tend to reflect the underlying cost structure in their retail tariffs – but will also look at what tariff structures are most likely to appeal to customers and be easy to communicate. As such suppliers can play a useful role in translating the complexity of underlying charging structures into a range of tariffs that might appeal to different customers.

However equally there are risks that in translating those underlying cost structures suppliers will create further complexity (with different thresholds, time bands etc) that make comparison difficult – or that they will look to focus their attention on customers who have a lower cost to serve but without passing on those benefits (eg pensioners at home all day will have a flatter demand profile but may be less engaged in the market). These were all historic problems which prompted major interventions such as the Retail Market Review which focussed on tariff complexity and the introduction of the price cap to protect disengaged consumers.

Clearly the price cap represents a major intervention in the market. With around two thirds of customers still covered by the cap as at August 2025, any move away from the predefined price cap structure (of a standing charge and unit rate) would leave suppliers exposed, as was highlighted in most responses to the earlier consultation on offering a zero standing charge tariff. That is why the right approach must be to change the underlying structure of network charges. The price cap structure would then have to be changed to reflect that different structure and this would potentially require a change to legislation.

As an example of the problems with different charging structures, we have previously highlighted the problems with how Economy 7 is dealt with under the price cap[20]. Because the price cap has to set a single unit rate Ofgem had to make an assumption around the weighting of day and night rates which did not necessarily reflect the actual split for individual suppliers and allowed them to game the arrangement in how they set relative day and night rates. This highlights the problems of allowing suppliers flexibility in how they set rates to encourage demand response while customers still assume they are protected by the price cap.

Ofgem acknowledged these issues in its discussion paper on the future of the retail price cap[21] and the responses to that consultation should inform thinking on this question.

Question 4: What options for amending non-domestic cost allocation and recovery should we explore in more detail and why? What options should we rule out at this stage and why?

Broadly the same options merit consideration for non-domestic customers apart from options linked to income / wealth. We can see no real case for block tariffs for non-domestic.

As flagged in response to Q8, Ofgem would need a significantly better understanding of current demand profiles and future trends in electrification and demand growth in the non-domestic sector before it could take an informed decision on changes.

One additional issue that perhaps needs articulating here is government's decision around the subsidy provided to energy intensive users which is funded by domestic and small non-domestic customers.

[20] https://sustainabilityfirst.org.uk/wp-content/uploads/2023/02/glen_dimplex_report_economy_7_Jan23.pdf

[21] https://www.ofgem.gov.uk/press-release/ofgem-launches-discussion-future-price-cap

We would also flag data centres as a category that requires explicit consideration, given that they are a driver of significant network investment but with some uncertainty around their future use of the system. Some places have introduced specific network charging structures to deal with data centres. A paper by Berkley University provides a framework for looking at the issue and evidence of approaches being adopted in the US[22], where the question of who bears the cost is becoming a live concern among campaigners[23]. Here, Energy UK advocates the use of network charging to provide a strategic locational signal for data centres[24] but our engagement on REMA leads us to question whether these charging differences would ever drive locational choices which are determined by a range of other factors (of which time to connect may well be more relevant) and highlights the need to consider connections alongside network charging in this review.

Question 5: Should we consider alternative methods for splitting network costs between domestic and non-domestic consumers? If so, what methods should we consider and why would these alternative methods benefit consumers?

The current approach would seem to involve splitting network costs on a volumetric basis but it would be helpful to have this set out formally.

This feels pragmatic but a broad sense check would be valuable looking at likely longer-term trends and future cost drivers (eg moves by non-domestic customers to generate more power on site but where customers want to retain capacity to use the grid as back-up).

On gas, the key debate has been around the inter-generational equity questions linked to recovery of historic and ongoing costs with declining gas customer numbers. As a part of this we asked Ofgem to look at likely trends in non-domestic consumption (and to confirm how the split between domestic and non-domestic is determined currently) to inform its understanding of future domestic gas customer charges. This information would still be useful.

On electricity, we note the significant support that is provided to energy intensive users through the government mandated British Industry Supercharger scheme. In the Appendix to the Call for Input it says that these costs are currently recovered through a levy on suppliers (and hence customers at large) – although it is unclear if the latest increase will be funded the same way. More transparency is needed around the extent to which industry is being subsidised through domestic energy bills. As noted in our comments on Q6 any decisions around subsidies to industrial customers should be taken by government not Ofgem.

As set out in our response to Q4, we would also urge thought to be given to the particular issues associated with data centres which will be a driver of significant new network investment. This merits specific consideration as has been done in other countries to ensure that domestic customers are not subsidising this development (or being left exposed to carrying these costs if the data centre ceases to make full use of the assets).

[22] https://eta-publications.lbl.gov/sites/default/files/2025-01/electricity_rate_designs_for_large_loads_evolving_practices_and_opportunities_final.pdf
[23] https://www.carbon-direct.com/insights/who-pays-for-the-cloud-the-hidden-costs-of-rising-data-center-demand
[24] https://www.energy-uk.org.uk/publications/powering-the-cloud-how-data-centres-can-deliver-sustainable-growth/

This highlights the need, as part of thinking about the balance between domestic and non-domestic customers, to also look at how connection costs are recovered and to what extent they are socialised.

Question 6: What do you think of the five criteria we have proposed to assess and the descriptions we have provided for their scope? How should we balance the trade-offs between these?

The criteria are largely uncontentious and reflect those that are widely used in any work looking at network charging (see the range of references above[25]). We have however noted some reflections below.

We would encourage careful thinking around the treatment of **economic efficiency**. This can sometimes end up being interpreted as avoiding any distortions in the cost-reflective price signals. However, in an area like energy where there are wider policy goals we should only be concerned about distortions if they also undermine other objectives. For example, we actually want to encourage energy use by those who may currently be under-heating their homes – imposing broader societal costs through health risks etc - but otherwise to encourage energy efficiency (noting that there is no carbon price in domestic gas use) and discourage peak electricity use by high users (for eg EV charging). The suggestion in the CfI that volumetric charging for gas is inefficient set off alarm bells for us.

While we understand the reason for including economic **growth** (as a new duty that is a priority for government) we are unclear how pertinent it is here. In particular, any decisions that might be seen as subsidising industry to support economic growth should be taken by government not by Ofgem.

We strongly support the inclusion of **fairness** as a principle but would stress that it is not an easy concept and means very different things to different people (we all pay the same, we pay the costs of what we use, we pay what we can afford etc). As part of our work supporting DESNZ in running the end user forum we focussed quite extensively on fairness[26], drawing on our past work. Our strong sense remains that the top priority must be to ensure affordability of a basic level of essential usage. However, we also endorse the need for consumer input into this debate, using deliberative techniques and encouraging people not just to look at this from the perspective of what it means for them.

In terms of **balancing the tradeoffs** this **has to be a matter of judgment** and cannot be distilled down to simple metrics or a CBA[27].

As one of the early thinkers in this area said: "*this attempt to make rates perform multiple and partly conflicting roles calls for wise compromise, and the key to wise compromise can seldom be found in any simple formula or in any simple measure of economic optima*"[28].

[25] Plus the review of how these criteria have been applied in Maxine Frerk's Review of Network Charging
[26] https://sustainabilityfirst.org.uk/wp-content/uploads/2023/11/End_User_Forum_1_-_16_Feb_2023_-_DESNZ_Readout_-_Fairness.pdf
[27] As discussed in Maxine Frerk's paper on network charging but also her work on Investing for Net Zero in the face of uncertainty" – with Oxford University - here.
[28] James C. Bonbright. Principles of Public Utility Rates 1961

We would also stress – as per our response to question 8 - that the tradeoffs are not only between the criteria but also within them (eg on different aspects of fairness).

Question 7: What evidence should inform our options assessment? You are encouraged to share information, analysis and evidence with Ofgem to inform our assessment.

As highlighted above we would urge Ofgem to look back at the evidence gathered in response to past consultations on closely related topics and at the international evidence – including our own inputs listed at Appendix 2.

We would also reiterate (as per our response to Q6) that developing complex models and analysis will not help in making these tradeoffs which are about judgment and proportionality.

However, to inform these tradeoffs we see a few crucial areas where Ofgem lacks the data and understanding to inform its thinking and where a focussed effort is needed to fill the gaps:

Granular demand data linked to socio-demographic information

In all the past work that we have engaged with around questions of fairness in charging we have encountered the problem that Ofgem does not have the data to understand ToU patterns of consumer demand by household demographics. This was a theme of our PIAG work[29] where we argued that Ofgem would be flying blind into the energy transition if it did not improve its access to smart meter data.

In our work on the TCR we questioned the distributional impacts analysis[30] carried out and we subsequently challenged the lack of triangulation with DESNZ NEED data which shows a greater level of correlation between income and energy demand than the Ofgem / CSE analysis (based on the Living Costs and Food Survey)[31].

In our work on Economy 7 tariffs[32] we raised concerns about the fact that the assumed day-night split likely represented the average of two cohorts (those with and without storage heaters) with very different usage patterns and where typically Economy 7 was unsuitable for those without storage heaters. Ofgem's response was that it did not have the data to look below the overall averages provided to it by Elexon. On the implications of half hourly settlement we had raised similar concerns about Ofgem's inability to effectively monitor the market.

Finally in the recent consultation on standing charges Ofgem cited some surprisingly detailed figures around the numbers of low-income high-use customers who were medically dependent but without providing a source which would have allowed us to judge their robustness.

For stakeholders to have confidence in the end results of this programme of work there must be a shared view of the starting position around the link between usage levels and income. While we have high regard for the work of CSE we would still maintain that this work should be open to scrutiny and challenge. We have seen different positions being taken on standing charges as between Citizens Advice and other consumer / fuel poverty groups (including NEA and

[29] https://www.smartenergydatapiag.org.uk/ and in particular the paper on Ofgem use cases - here
[30] https://www.gridedgepolicy.com/_files/ugd/140d4b_d97aba68981041978c5367c405c1eca1.pdf
[31] https://sustainabilityfirst.org.uk/wp-content/uploads/2020/09/Distributional_Impacts_Grid_Edge_Policy_300920.pdf
[32] https://sustainabilityfirst.org.uk/wp-content/uploads/2023/02/glen_dimplex_report_economy_7_Jan23.pdf

ourselves) which in part, at least, reflects a different perception of the extent of the correlation between income and energy use.

On the time profile of usage there has historically been much less variation across income groups with all having a similar evening peak. However, within income deciles there are very significant differences (as explored in our response on consumer impacts of half-hourly settlement[33]). It is important not to simply look at averages but to look at the range of impacts at an individual level – a point we also repeatedly made on REMA - because a key element in fairness includes the range of impacts on individuals of the change being made.

It is also important to understand how these profiles might vary over time for different demographic groups (with the rise of PV and batteries, EVs etc).

Looking at the distributional impact of changes in tariff structures we would also encourage Ofgem to look at the work by Ideal Economics on the higher price elasticity for low-income customers[34]. We have not seen this taken into account in any past Ofgem analysis but is an important factor that helps justify the focus on affordability as a key element of fairness.

An understanding of demand patterns and likely trends across the non-domestic sector

While we recognise that the non-domestic sector is complex, it is clear that Ofgem has very limited information about the patterns of demand in the non-domestic sector, their decarbonisation plans, readiness to provide flexibility etc. Absent this understanding it is going to be hard for Ofgem to take informed decisions on any changes to charges for non-domestic customers or the split between domestic and non-domestic. The introduction of banding for the capacity charges on transmission was problematic but may have given Ofgem some insights. However, a more systematic review of the demand profiles of this sector and the way in which they will be driving future costs through electrification or demand growth (eg data centres) needs to underpin this work.

A proper understanding of the drivers of network costs (especially distribution)

While cost reflectivity is widely accepted as a key principle that should underpin network charging (and which drives economic efficiency) there is little evidence that Ofgem understands the short- and long- term cost drivers other than in very broad terms.

While the networks were broadly stable this was probably not crucial but as the Call for Input acknowledges, with the significant network investment anticipated, this really does need to be properly understood and reflected in thinking on network charging. Historically the RIIO price control process (where Ofgem does look in depth at cost drivers) is managed completely separately from network charging and it would help if they were brought more closely together.

We would also note that for transmission, the cost drivers are arguably simpler and linked to system peak demand. With transmission charging having been the subject of a number of reviews this is probably also better understood than distribution. Distribution network charging currently (25/26) accounts for £6.8bn as against £5.2bn for transmission[35] and has not been subject to major reform since 2010 (albeit there is a Distribution SCR ostensibly still ongoing).

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[33] https://www.gridedgepolicy.com/_files/ugd/140d4b_d49b1567f5a0477bb80505463743c867.pdf
[34] https://idealeconomics.com/submission-to-ofgems-call-for-input-on-standing-charges/
[35] Source NESO Charging Futures Forum - https://www.neso.energy/document/363086/download

There are questions around how much the cost drivers vary across the network dependent on the mix of customers, for example. As noted above a key concept in terms of distribution network design is that of "after diversity maximum load" which never appears in any Ofgem discussion of charging. SSEN's recent work looking at the potential for procuring a Demand Diversification Service[36] is important for Ofgem to understand in this context.

Historically the DNOs have had limited visibility of load levels on their low voltage networks but as this improves and as they start, in ED3, to seriously address how their networks need to evolve to meet net zero, Ofgem should look to capture the insights and data that becomes available to inform this review.

Question 8: What are the main trade-offs between our proposed assessment criteria? What are the main positive interactions?

As flagged above, and in our cover letter, the trade-offs are not just between criteria but within them.

In particular, the critical tradeoff (which arguably kicked off this work) was the tension within "fairness" on how to deal with standing charges. While low income customers typically use less energy there will be a small number of households with high usage linked to medical dependency. There is not currently a shared view of how this tradeoff should be made (though our view is that you should focus on the average low income household and deal with the exceptions within that through targeted support).

The other interplay within fairness is between a greater weighting to volumetric charges which would help those on low incomes but where there are also concerns around the fairness of those who are on higher incomes with solar and battery being able to avoid paying a share of the fixed costs or in the non-domestic space of customers moving to microgrids. One solution we have advocated is to charge customers a standing charge for export. From a net zero perspective increased solar PV is positive and hence this might be resisted but it would be a more targeted solution than increasing standing charges for everyone.

We also see some tension between economic efficiency and fairness in terms of where the benefits of flexibility fall. Ofgem and DESNZ routinely argue that increased flexibility will benefit everyone as it will reduce the overall costs of the system. This is a welcome conclusion in terms of fairness. However, from an economic efficiency argument and in order to encourage the very high required levels of flexibility, we would expect those providing flexibility to see the full benefits of the services they provide.,

We would also observe that in past discussions the other major tradeoff has been around practicality. Moving to a different basis of charging such as capacity charges for domestic customers has been seen as too difficult even if it has other benefits. While such a change might take time, being clear that this is the direction of travel and thinking about sensible incremental steps is one way of navigating that trade-off.

[36] https://www.ssen.co.uk/news-views/2024/SSEN-tests-innovative-solutions-in-new-electricity-demand-trial/

Similar tradeoffs arise with more temporal / geographic granularity or more dynamic tariffs which may have theoretical benefits but will involve significant costs to implement and where, if reflected into end consumer tariffs, are likely to be seen as too complex and confusing for consumers. Again, an incremental approach on a clear pathway may be a way to balance those objectives.

Finally – while it does not fit neatly into the criteria Ofgem propose – we see a tension around how major reforms fit alongside the price cap and the ambition to return to a much more dynamic retail market which can engage customers and help deliver the consumer flexibility seen as critical for Clean Power 2030 (and beyond). With the price cap having been in place since January 2019, and with two-thirds of customers still covered by it, it has fundamentally reshaped the market. While there are innovative tariffs aimed at more savvy EV users, for example, for most customers the choices remain relatively simple. Looking back prior to the price cap to the major Retail Market Review in 2011 there were real problems with a proliferation of tariffs with customers struggling to compare prices and many customers on tariffs that were not right for them (as we found more recently even with basic Economy 7 tariffs). Ofgem needs to be alive to the implications for retail competition and to understand the policy direction in that space as different options carry different benefits and risks.

Question 9: Do you agree we should consider impacts up to 2035?

We are concerned that this suggests Ofgem will be focussed on an analytical assessment of impacts up to a certain date – which we do not believe is how these trade-offs should be made.

Looking at the experience of market-wide half-hourly settlement (first proposed in 2014[37], with a formal IA published in 2020 and implementation now due 2027) this feels like a short timeframe to be thinking about.

Our view -as noted above – is that Ofgem should be looking at a pathway for reform – setting a longer term direction and identifying practical incremental steps that would allow progress to be made but acknowledging that data and digital capabilities plus the extent of electrification and automation, mean that longer term it may be practical to cope with more complex arrangements than it would be today.

[37] https://www.ofgem.gov.uk/sites/default/files/docs/2014/04/electricity_settlement_launch_statement_0.pdf

Annex 2: Sustainability First research and relevant consultation responses

Reports[38]

What is Fair? How should we pay for the energy system of tomorrow? (2019) - https://sustainabilityfirst.org.uk/wp-content/uploads/2019/09/Sustainability_First_Future_Energy_Market_Discussion_Paper_September_2019.pdf

The Impacts of Ofgem's Targeted Charging Review by Grid Edge Policy (2019) https://www.gridedgepolicy.com/_files/ugd/140d4b_d97aba68981041978c5367c405c1eca1.pdf

Distributional Impacts of a Move to Half-Hourly Settlement by Grid Edge Policy (2019) https://www.gridedgepolicy.com/_files/ugd/140d4b_d49b1567f5a0477bb80505463743c867.pdf

Ofgem's Approach to Distributional Impacts – A Technical Assessment by Grid Edge Policy (2020)https://sustainabilityfirst.org.uk/wp-content/uploads/2020/09/Distributional_Impacts_Grid_Edge_Policy_300920.pdf

It's a Lottery – How Ofgem's Price Cap Fails Economy 7 Customers (2023)https://sustainabilityfirst.org.uk/wp-content/uploads/2023/02/glen_dimplex_report_economy_7_Jan23.pdf

Consultation responses (and blogs)

Response to Ofgem and BEIS Consultation on Flexible and Responsive Energy Retail Markets (2019)

https://sustainabilityfirst.org.uk/wp-content/uploads/2020/09/Ofgem_retail_SF_response_FINAL.pdf

Blog – Encouraging greater household consumer engagement in demand response (2019)

https://sustainabilityfirst.org.uk/blog/encouraging-greater-household-consumer-engagement-in-demand-response/

Response to Ofgem Call for Evidence on the Consumer Impacts of Market-Wide Half-Hourly Settlement (2019)

https://www.ofgem.gov.uk/sites/default/files/docs/2019/07/ofgem_hhs_sustainability_first_response_27.03.19_0.pdf

Ofgem Call for Input on Locational Pricing Assessment (2022)

https://sustainabilityfirst.org.uk/wp-content/uploads/2022/06/Ofgem_Call_for_Input_on_Locational_Pricing_240622.pdf

[38] Grid Edge Policy Reports have been written independently by Sustainability First Associate Maxine Frerk and have been the subject of Sustainability First roundtables and informed key responses

Response to Ofgem Consultation on a Review of the Typical Domestic Consumption Value (2023)

https://sustainabilityfirst.org.uk/wp-content/uploads/2023/03/sf_response_tdcv_090323.pdf

Response to DESNZ Consultation - Towards a more innovative retail energy market (2023)

https://sustainabilityfirst.org.uk/wp-content/uploads/2023/09/SF_DESNZ_Retail_Innovation_consultation120923.pdf

Response to Ofgem Call for Input - Engaging Domestic Consumers in Energy Flexibility – (2023)

https://sustainabilityfirst.org.uk/wp-content/uploads/2023/10/Ofgem_-_CfI_-_Flexibility_and_Engaging_Domestic_Consumers_-_2_October_2023_SF.pdf

Ofgem Call for Input on Standing Charges (2024)

https://sustainabilityfirst.org.uk/wp-content/uploads/2024/01/SF_Standing_charges_response_170124.pdf

Response to Ofgem Discussion Paper on Future Price Protection (2024)

https://sustainabilityfirst.org.uk/wp-content/uploads/2024/05/SF_Future_Price_Protection_090524.pdf

Response to DESNZ Call for Evidence on Future Default Tariffs (2024)

https://sustainabilityfirst.org.uk/publications/consultation-submissions/future-default-tariffs-response-to-desnz-call-for-evidence/