

Future default tariffs

Call for evidence

Closing date: 22 April 2024



centre for
sustainable
energy

www.gov.uk/government/calls-for-evidence/default-energy-tariffs-for-households-call-for-evidence –

Online responses <https://energygovuk.citizenspace.com/clean-electricity/default-tariffs-call-for-evidence/>

About Us

The Centre for Sustainable Energy (CSE) is a charity supporting people and organisations across the UK to tackle the climate emergency and end the suffering caused by cold homes. We do this by sharing our knowledge, practical experience and policy insights. For over 40 years, we've supported people to take effective action on energy in their homes. We help communities and local councils to understand energy issues, set priorities, and put plans into action. Our research and analysis focus on making the energy system greener, smarter and fairer. Through our advice line, home visits and one-to-one support, we support around 15,000 people a year to reduce their bills and make their homes more energy efficient.

We deliver fuel poverty services for two of the electricity network operators and six local authorities. Through these services, we support thousands of people on low incomes who often have multiple vulnerabilities. They are unable to navigate the energy market without our support. Our support helps them find an amicable solution to their issue which ultimately helps the energy supplier by lowering their unserviceable debt, reducing customer service enquiries and reducing the number of interventions they face from the ombudsman. Our response here is informed by the experience of the thousands of people we speak to in fuel poverty every year, and our research exploring the pathway to net zero and ending fuel poverty.

CSE's response

Our perspective is that, in the upcoming decade, addressing the intermittency of energy supply will be crucial to decarbonise our energy system. When energy generation from renewables like wind and solar is lower than needed we need to be able to balance energy demand. We do this by asking others to behave more flexibly i.e. getting others to use less or supply energy they've stored in batteries. If we can't do this, we will need to access energy from easily dispatchable fossil fuels like gas.

On the supply side, many steps are being taken to address this issue, however the move to half-hourly settlement is also critical to encourage customers to use energy flexibly, in a way which supports the full decarbonisation of the electricity grid. We therefore support this change.

However, from the perspective of customers, the move to half-hourly metering and the likely greater prevalence of time and type of use tariffs is a major shift in how consumers interact with the energy market. *When* they consume electricity rather than *how much* they consume will increasingly influence how much they pay. While it provides the opportunity for customers to reduce their costs and capture economic benefits from flexible energy use, it also introduces significant complexity and new opportunities for unfairness and exclusion by altering the distribution of system costs and benefits between consumers. The change threatens to leave behind large numbers of people as new complexities or costs exclude them from being able to participate meaningfully in our future energy system.

Through CSE's Smart and Fair project¹, we have been working to monitor and describe the range of smart energy products and services available to domestic consumers. We have used our smart energy capabilities lens to classify and profile service and product offers according to the capabilities they require of consumers, allowing us to gauge how well different segments of the population are being served. Many of the recommendations from this work are relevant to the consultation.

We welcome the creation of default tariffs to provide safeguards, but beyond this, consider that many customers (not just vulnerable groups) will require further help and support to enable them to navigate this added complexity and secure the best tariff for their individual circumstances. Therefore, prior to addressing your questions, the default tariffs should be supported by the following:

A national awareness campaign is needed

Government should create a national information campaign providing information about the smart energy transition including how time and type of use tariffs might benefit customers, the role that smart meters play in decarbonisation and myth-busting around both smart meters and renewable energy technologies such as heat pumps. It's key that the public understands what is meant by 'smart tariffs', how they operate, the impact of smart tariffs on their bills and whether and how they need to change behaviour to benefit.

Transparency for efficient market operation

CSE's Smart and Fair research found a lack of clear terminology to describe smart energy offers, making it hard to compare similar offers, or understand the differences between offers. In addition to confusing terminology, there is also little descriptive information or transparency about expected costs and benefits. This impacts people's ability to navigate the market and limits transparent competition within this emerging market.

¹ <https://centreforsustainableenergy.ams3.digitaloceanspaces.com/wp-content/uploads/2024/02/25144104/smart-and-fair-working-with-the-smart-energy-capabilities-lens.pdf>

In our Smart and Fair report, we recommended that Government do two things. Firstly, mandate standard information that flexibility service providers and manufacturers of smart energy products publish. And secondly, agree a simple methodology to produce costed examples for smart energy offers that allow households to understand how products, services and tariffs combine to affect household running costs.

These recommendations apply equally to energy providers as the distinction between them and flexibility providers starts to disappear. This would boost market competitiveness and the ability of consumers to engage, but also allow more effective oversight of the market by consumer advocacy organisations.

Likewise in the Smart and Fair report, we refer to the HOMEflex code of conduct developed by Flex Assure and SSEN for the provision of flexibility services. A key principle outlined in the code is the requirement that Flexibility Service Providers will identify the most appropriate service for a domestic consumer and assess the benefits that households can expect to see from the service being offered. Moreover, if a flexibility provider assesses a household as unlikely to benefit from their offer, the provider either makes recommendations that might increase a household's suitability or suggests an alternative offer that is more suitable. This recommendation should apply equally to how energy providers treat their customers when helping them choose a suitable tariff.

To avoid products being mis-sold, government should also consider the information that energy providers should provide to customers on what they need to do or what technology they need in order to access the benefits of a particular tariff. For example:

- To benefit from tariff X you need a smart meter so you know when the cheap and expensive periods are.
- To benefit from tariff Y you need to use appliances outside of peak times where you can.

The smart capabilities lens within our Smart and Fair report provides more detail.

Online support tools

Beyond this we see value in creating a cross market automated online tool to give customers advice on the type of tariff that would best suit them. Given the increased complexity of the tariffs likely to be on offer this would need to collect additional information from consumers including:

- Their heating source: gas, air source heat pump etc.
- Energy use patterns, consumption levels.
- Energy technology which might affect their ability to use and benefit from flexible energy use, such as:
 - Smart meter

- Rooftop solar PV
- EV vehicle charging (smart or passive)
- Domestic battery storage
- Night storage heaters
- Immersion water heater
- Their capacity to be flexible with their use of energy through behavioural changes (for example, people with children have little flexibility as to when they cook evening meals and use hot water),
- Their likely willingness or capacity to engage with smart energy technology.

CSE have already created an online Energy Choices Tool that can be used by an advisor to gauge a client's smart energy capabilities and match these to an offer's requirements. This could provide the basis for the creation of such a tool. We consider that there is a role for government in supporting the creation and upkeep of such a tool and requiring energy suppliers to engage proactively with it.

Energy advice

Government should develop a strategy for the long-term funding and provision of smart energy advice across the UK.

Experience from our own energy advice service is that the most vulnerable customers are however unlikely to use or benefit from a passive online tool and still require bespoke advice from a person. Therefore, we would encourage the government to develop a strategy for the long-term funding and provision of personalised smart energy advice (delivered non-digitally) across the UK. Without this support, there is a significant risk that vulnerable customers get left behind, further entrenching inequalities in the energy system, decreasing public confidence in the energy system, and risking the transition to net zero. Whilst the peak of the energy price crisis has passed, nevertheless our advice service continues to experience very high levels of demand, with many people being in desperate need. In our work supporting vulnerable customers to better understand the benefits of smart tech and ToU tariffs, we have developed excellent skills and resources for explaining these newer topics to our customers. We have seen the benefits of this on our clients with those who would typically be less likely to adopt these new technologies building their knowledge and confidence and would recommend similar projects are funded in future so that more consumers can benefit from this support.

Here is CSE's full response to the government's questions.

Principles for future default tariffs

1. Do you agree with these principles?

In general, we support the three principles outlined. Principle 2 should be explicit about the fact that tariffs should be designed to be simple.

*Principle 2 – Default tariffs should **be simple and be designed to protect consumers from unnecessary complexity and costs.***

Even at present, many vulnerable consumers struggle to get the best value from the energy system. Exposing consumers to dynamic energy costs, will exacerbate this. Default tariffs should be simple to protect vulnerable consumers.

Principle 3 is ambiguous. It alludes to people using energy at the wrong time creating higher costs for others. The principle should be explicit that where a customer's inefficient use of a new low carbon technology (for example peak hour EV charging) imposes additional system costs arising from system balancing that they should pay them.

2. Are there any other key decisions concerning the future regulation of default tariffs that you believe these principles would not cover?

A question not covered in the consultation is whether and how households owning EV's should contribute to the cost of grid reinforcement given the extra burdens they place upon it. Currently, these costs are spread across all users through the standing charge, but this does not seem fair. Whilst we support the growth of electric vehicles, a fair proportion of these costs should be borne by EV drivers.

Although all the principles touch on equity issues, none are specific enough on the possible impacts of the greater prevalence of ToU tariffs and dynamic pricing on vulnerable households. Default tariffs need to consider and avoid the unforeseen consequences of vulnerable households being exposed to dynamic energy pricing. For example, some disabled consumers with high energy use due to medical equipment may be unable to flex their demand and should not be penalised. We would therefore suggest a further principle be added as follows.

Principle 4 – Default tariffs should be designed to avoid unintended outcomes for vulnerable groups which exacerbate the social and health impacts of fuel poverty.

The evolution of default tariffs

3. With current licence conditions, do you believe most domestic consumers will continue to default onto single-rate standard variable tariffs in future or are suppliers likely to consider using ToU tariffs as a default?

We have no evidence that suppliers will begin moving people to ToU tariffs as a default in the near future. However, in the medium term this is possible as the energy system contends with greater intermittency arising from an energy supply with a greater proportion of renewable sources. Additionally, once half-hourly settlement comes into force in 2026, suppliers will be incentivised to pass on costs (and some of the benefits) to consumers through the increased use of ToU tariffs.

4. Should protections be placed on the type of default tariffs that suppliers use for domestic consumers? If so, what should those protections be; for example, is there a case for limiting default ToU tariffs to static rather than dynamic pricing?

Yes, in line with the second proposed principle, suppliers should be seeking to protect consumers from unnecessary costs i.e. offering them the best deal for their circumstances. When a consumer has a smart meter, their supplier can establish a typical demand profile and inform the consumer which of the supplier's tariffs should be the cheapest option based on past use.

Where consumers have a smart meter, suppliers have most of the data required to create a typical demand profile for the household. This profile could then be used to determine the best default tariff for them e.g. a standard variable tariff vs. a default ToU tariff. The data that suppliers won't have is the customer's degree of flexibility to change when they use electricity and their ability and interest in engaging proactively.

Suppliers should tell customers what tariff they would be best off on 30 days before the tariff ends.

If suppliers begin to offer ToU tariffs as default options, we suggest that where a customer has an operational smart meter, the supplier should contact the customer 30 days before the end of their contract outlining which default tariff they would be better off on. As standard all bills should also include modelling of customers' energy costs over the past 12 months were they to have been on the provider's alternative available tariffs.

Ofgem should research the differential impact of TOU default tariffs using archetypes

We would urge Ofgem and DESNZ to commission research into the likely variation in costs and distributional impacts associated with new default ToU tariffs. Ideally, this will use Ofgem's Consumer Archetypes alongside anonymised smart meter data. The

ideal dataset would provide enough granularity to determine the impacts on households with protected characteristics².

How to implement default TOU tariffs

If default TOU tariffs are going to be implemented we would recommend a transition period of two years which is accompanied by the wide national awareness campaign discussed above. We have suggested three stages for the introduction of new default tariffs:

Stage one - year one of new default tariff model

Existing tariff	Defaults onto
Standard	Standard default
Economy 7	Economy 7 default
Other time or type of use tariff	Either all of these tariffs are rolling, or they default onto a static time of use tariff (see Q7 for more details)
Electric vehicle time or type of use tariff	Either all of these tariffs are rolling, or they default onto a dynamic time of use tariff

Customers with working smart meters should be informed on their bill at least once every 3 months if there is another tariff they would have been better off on based on their previous 12 months usage.

Concerted efforts need to be made during this time to increase public awareness of default tariffs and how to make the most of them (please see our 'Awareness Campaign' section of our introduction in this response).

Stage two - years one to two of new default tariff model

Existing tariff	Defaults onto
Standard	Standard default
Economy 7	Economy 7 default or off-peak static time of use tariff (which ever would be cheaper)
Other time or type of use tariff	Either all of these tariffs are rolling, or they default onto a static time of use tariff (see Q7 for more details)
Electric vehicle time or type of use tariff	Either all of these tariffs are rolling, or they default onto a dynamic time of use tariff

² <https://www.gov.uk/discrimination-your-rights>

Stage three – years 2+ of new default tariff model

Existing tariff	Defaults onto
Standard	Whichever default tariff (of the 4 detailed in Q7) they would have been better off on over the past 12 months.
Economy 7	
Other time or type of use tariff	
Electric vehicle time or type of use tariff	Either all of these tariffs are rolling, or they default onto a dynamic time of use tariff

When customers are defaulted onto a ToU tariff, they are sent information about how to make the best use of this tariff and given some choices of straightforward ways to switch to their regular tariff (e.g. reply ‘Standard’ to a text message sent to them without exit penalties).

Each 3 months the supplier should be required to print on your bill if you would be better off on a different standard tariff.

5. Should there be different default arrangements for consumers identified as being vulnerable?

Yes. Many vulnerable households and households in fuel poverty are highly sensitive to pricing signals and many are already highly attuned to their energy use and spending. Such households, being under economic pressure to act flexibly, may see no choice but to sacrifice their comfort, convenience, or well-being, sitting in the cold and dark to save costs.

We would advocate a social tariff to protect vulnerable consumers

In the future, when working smart meters are installed in the majority of households, we would advocate for the introduction of a dynamic social tariff to avoid these unintended outcomes and the unwanted health and social consequences which would be likely to follow on. This social tariff would address vulnerable customers level of need but also recognise the value they already offer to the energy system through their low level of energy usage.

Additionally, low-income, and vulnerable households will often have barriers which prevent them from flexing their energy use, such as:

- Energy-inefficient homes
- Fewer flexibility-enabling assets (smart meters, controllable electric loads, storage, and generation)
- Fixed energy needs e.g. nebuliser
- No high-speed internet connection.

Other barriers can include limited personal agency, particularly for tenants; upfront cost; lack of information and awareness; and mistrust of energy companies.

Our view is that a social tariff should discount the price of energy when vulnerable households need it most. This would ideally be funded by taxation as this would be the most progressive way of doing so. If this isn't politically viable then we'd recommend the unit rate of the gas bill (as a way of beginning to equalise the differential between gas and electricity costs). For example, when the temperature drops below a certain threshold their energy costs are heavily discounted, the householder would be sent a text message notifying them that it's safe for them to fully heat their home. We also acknowledge that the world will remain analogue for some consumers, and they also need to be offered the same levels of protection i.e. through a fixed discount on their annual bill.

We share the views expressed by Age UK in their "Keeping the lights on" report³ that the current reliance of most energy related support on the welfare system as proxy eligibility criteria means some of the most vulnerable people remain excluded, with 34% of older people who are eligible for Pension Credit missing out on their entitlement and around four in 10 households in the poorest fifth of the population not receiving means tested benefits. Many people of all ages sit just above the threshold for receiving support. Despite still facing significant financial strain these groups are rendered ineligible for recent means tested cost-of-living payments and making access to Warm Home Discount support far more difficult.

Under Age UK's proposal, using improved data matching processes, eligibility would be extended to include all of those living in relative poverty. In the absence of this improved data matching, a series of proxy eligibility criteria proposed by the Department for Energy Security and Net Zero (DESNZ) for the Energy Company Obligation could be used instead. Age UK also propose a ringfenced flexible support fund initially backed by an annual £500 million to enable multiple agencies to proactively identify households struggling with their bills and refer them for the social tariff, including DESNZ, the Department for Work and Pensions (DWP), Ofgem, suppliers, installers, local authorities, health and care providers, carers, and community and voluntary organisations.

As mentioned in answer to question 11 we are concerned that clients identified as being vulnerable may be at a disadvantage if they cannot afford to buy the equipment needed for them to make the most of the cheaper dynamic tariff rates. For example, technology needed to make their night storage heaters and immersion tanks smart enough to make the most of dynamic tariffs.

³ www.ageuk.org.uk/globalassets/age-uk/documents/reports-and-publications/reports-and-briefings/safe-at-home/age-uk-energy-public-policy-report-march-2023.pdf

Funding should be provided to allow low-income users access to products and services to shift their usage.

We would wish to see a requirement for energy providers to help vulnerable customers secure benefits from flexing their energy use, providing affordable access to technologies and services that facilitate flexibility — such as high-speed internet access, smart meters, and controls — and to flexibility-enabling upgrades to buildings and other infrastructure.

Government should commission research to understand vulnerable customers' ability to flex their usage

It would be useful to have further data about the ability of different vulnerable groups to flex their usage. It may be that some Ofgem Archetypes are able to flex their usage due to being home during the day. It may also be that this group have a smaller demand at peak times due to using heating throughout the day rather than needing to heat up their homes at 5pm.

Support to resolve issues with smart meters

As discussed in relation to Question 10 we foresee significant issues for vulnerable customers caused by the lack of agreement or enforcement of mending or replacing broken smart meters. At present we are not aware of any incentives for suppliers to fix broken smart meters. In our experience vulnerable customers are less likely to follow the steps usually needed to get broken smart meters fixed (raising a complaint and taking this complaint to the ombudsmen if it is not resolved). Therefore if they are on ToU tariffs and their smart meters break they cease to benefit from the cheaper tariffs offered.

6. What rights should domestic consumers have over the type of tariff they default onto? Should all suppliers be able to provide both single- and ToU default tariffs for households to move onto?

All suppliers should be able to provide Standard, Economy 7 and ToU default tariffs for households to move onto. As described in Question 7 we envisage that all suppliers should offer the following four default tariffs as a minimum:

- Standard (flat rate).
- Economy 7 or Economy 10.
- Off-peak energy. A ToU tariff, with static peak and off-peak price periods identified.
- Electric vehicle dynamic ToU tariff (unless they offer rolling EV tariffs).

Consumers should have a choice about which tariff they default onto, as described in Question 4. Initially, consumers should be nudged towards adopting ToU tariffs (for example by providing information on their bills stating they would be better off on one) which promote flexible energy use, but there must be an alternative for those unwilling or unable to participate.

7. Are there specific default tariff arrangements that you believe industry or public bodies should trial?

Alongside the existing Standard and Economy 7 default tariffs we believe two additional default tariffs should be brought in:

- An EV dynamic ToU default tariff.
- A static ToU default tariff.

As discussed elsewhere within our response, smart tariffs should also be developed for lower income customers with movable loads, for example, night storage heaters and immersion heaters. As discussed in response to question 5 we also think a social tariff should be introduced.

An EV dynamic ToU default tariff

- From the perspective of using grid capacity efficiently and enabling the energy transition, a default EV tariff which would shift demand patterns through price signals would appear to be the most important tariff to develop. Further detail is given in our response to question 8.

Please see Question 8 for our reasoning for suggesting a dynamic TOU tariff for EV owners.

A static ToU default tariff

Similar to the Economy 10 tariff, this would offer off-peak fixed hours in the day and night. The rates for peak and off-peak would remain the same price and hours throughout the year. Based on current usage modes, these are some example fixed times:

- Off-peak hours:
10am to 3pm
12 midnight to 5:30am
- Peak hours:
3pm to 12 midnight
5:30am to 10am

The on and off-peak rate would not vary throughout the year in order to ensure simplicity for the consumer. The peak and off-peak rates should be covered by the price cap (as detailed in Question 15) to ensure transparency and maintain consumer confidence and therefore the peak and off-peak rates would only vary when the price cap is reviewed.

Benefits

- Simple and easy to understand. Similar to Economy 10 which is familiar to many people, especially older consumers who are often at high risk of missing out on the benefits of smart energy offers.
- Encourages consumers to shift their usage to off-peak times.
- Does not require the use of an app to monitor costs so suitable for consumers with varying levels of digital skills and does not exclude those without internet access or the installation of smart technology.

Modelling needed to decide off-peak times

- It is likely that with the introduction of Market-wide Half-Hourly Settlement (MHHS), increased penetration of renewable energy, increased TOU tariff use and increased EV charging the 'off-peak' times will change from where they currently tend to sit.
- To ensure the model is simple and easy to understand it is important that the off-peak hours stay the same for as many years as possible.
- We would therefore advocate modelling of the likely 'off-peak' times of day and night, in say 5 years, and setting the off-peak static ToU default tariff times on this future modelling.

Default tariffs for low carbon technologies

8. Do you agree that default tariffs for households with electric vehicles should be smart Time and/or Type of Use Tariffs?

As the transition to electric vehicles takes off, and particularly as the UK approaches the phasing out of new fossil fuel vehicles in 2035, EV charging patterns are likely to become highly influential on grid capacity, as well as being the biggest moveable load on the grid. If EV drivers are not incentivised to charge their vehicles flexibly, grid constraints and system costs are likely to grow further. At present, these costs imposed by predominantly affluent EV drivers (enjoying lower motoring costs) are socialised across all energy users. This is unfair.

By contrast, electric vehicles spend most of their time parked up. If smart EV charging and vehicle to grid charging can be adopted which enables vehicles to be charged when there is grid capacity and surplus renewable electricity, they have huge potential to

address and ease grid constraint and balance the grid. Vehicle to grid charging offers even more potential for flexibility.

The significance of system benefits for everyone if EV drivers charge smartly (and the potential system costs if they don't) justifies the creation of default time or type of use tariffs for EV users.

Type of EV Smart Tariffs

Whilst from the perspective of simplicity for users, a static ToU tariff would be preferable, given the scale of the total EV charging load, evidence⁴ from Reading University suggests that static UK-wide EV tariffs might be so distorting as to result in new periods of grid constraint. The study advised that regulatory interventions might be required to avoid mass adoption of single tariffs or over-similar tariffs.

Numerous energy suppliers have now launched EV tariffs, often comprising static ToU tariffs. Research should be undertaken to establish the extent to which dynamic and static ToU tariffs have influenced charging behaviour, how the tariffs have affected grid capacity and the value (or cost) these tariffs have offered to the energy system.

Given the evidence from Reading University, we would recommend the creation of dynamic time or type of use tariffs connected to smart chargers that would reward EV drivers for charging their vehicles at helpful times and penalise them for charging at inconvenient times. Provided the market is working properly (with high dynamic prices reflecting plentiful renewable electricity supplies, and low dynamic prices reflecting shortages), a tariff that maximises outcomes for EV drivers should also be delivering the system balancing benefits that we want.

Tariffs shouldn't penalise those who don't own EV's

CSE's Smart and Fair project⁵ found significant inequality in the tariffs available to those with and without electric vehicles. As shown below, currently EV drivers on ToU tariffs get the cheapest unit rates and standing charges for all their domestic supply. People who don't have EVs can't access these rates.

⁴⁴ EV smart charging: How tariff selection influences grid stress and carbon reduction - F. Daneshzand et al. Applied Energy 348 (2023) 121482 al. www.sciencedirect.com/science/article/pii/S0306261923008462

⁵ [Smart & Fair: working with the smart energy capabilities lens](https://www.cse.org.uk/resource/smart-and-fair-working-with-the-smart-energy-capabilities-lens/) - www.cse.org.uk/resource/smart-and-fair-working-with-the-smart-energy-capabilities-lens/

Table 4: Example of different tariffs currently on offer by a supplier

	Static ToU for EV owners only	Static ToU non-EV owners
Day rate	30.25p/kWh (05:30-23:30)	34.48p/kWh (07:00-00:00)
Night rate	7.50p/kWh (23:30-05:30)	14.45p/kWh (00:00-07:00)
Standing charge	36.54p/day	36.62p/day

A customer with an electric vehicle and electric mobility scooter could charge their mobility scooter for half the price of someone who doesn't have an electric vehicle. We've also seen customers with night storage heaters who'd be better off on an EV tariff but have been refused the ability to switch to it, because they don't have an EV. This is unfair. Where customers have the technology necessary to benefit from a flexible tariff (see Question 11 for our suggestions on how to improve parity for this) suppliers should not exclude customers from their tariffs due to not owning an Electric Vehicle. If a customer has the technology to access a dynamic ToU tariff for the night storage heater suppliers should be obligated to not exclude them from an EV tariff if it is cheaper than alternatives.

9. Should there be protections to the type of tariffs that households with electric vehicles default onto? If so, what should those protections be; for example, should they use static rather than dynamic pricing?

As referred to in question 8, for simplicity and ease of use EV users would ideally have static ToU tariffs, however it needs to be established whether a simple static TOU tariff would help ease grid constraints or would worsen these problems. It may be the case that dynamic EV tariffs are necessary to deliver the desired benefits in terms of releasing grid capacity.

10. What should default tariff(s) be for electric vehicle owners who do not possess a smart meter or smart charge point? Do you believe many electric vehicle owners are likely to be in that situation in future?

Whilst regulations require EV chargers to incorporate smart functionality from 2022, research for the Department of Transport in 2022⁶ revealed that almost half EV drivers (48%) not possess a smart charger. Some may not have smart meters. For such

⁶ <https://assets.publishing.service.gov.uk/media/628f5603d3bf7f037097bd73/dft-ev-driver-survey-summary-report.pdf>

customers, the priority should be to get them moved onto smart meters and smart chargers so they can benefit from smart charging.

Widespread issues with smart meters

Energy suppliers should have stronger rules requiring them to promptly mend broken smart meters and to ensure that when installed smart meters operate as they are meant to (this may include not installing smart gas meters where they are too far from the electricity meter to synchronise). Consideration needs to be given of what happens if a customer is on an EV or any other ToU tariff and their smart meter stops working. It is likely that in such a case the customer would suffer financially from such a fault, particularly if a dynamic ToU tariff is operating. If such a fault develops, the customer should be compensated so they do not pay more than they would have if the meter were working.

11. Are there any other technologies, for example, storage heating, which you believe should influence the default tariff arrangements of the households?

Yes. We believe night storage heaters and immersion water heaters are technologies where customers could benefit from better default tariffs. All are forms of movable electric load where ToU tariffs could benefit the householder in terms of lower bills and the energy system through easing grid constraints. ToU tariffs should be offered for these technologies. Where consumers have the technology in place that allows them to charge dependent on price signals, dynamic ToU tariffs should be available.

Implementation challenges and engineering requirements

It would be necessary to explore what equipment and engineering would be needed in order for each of these to be provided under a default tariff. For example, many night storage heaters run on a different circuit to the rest of the power in a property with their energy coming through a separate night rate meter. Where customers have separate day and night rate meters it is not always possible for these to be replaced with a single meter. Suppliers require customers to self-fund an ICERT from an electrician before agreeing to send out an engineer to install a new meter. At present this means that householders with night storage heaters have to remain on an Economy 7 tariff and therefore during the daytime and most of the summer have to pay much higher rates for their daytime electricity usage and are not encouraged away from using during peak hours.

For instance, properties with immersion water heaters or night storage heaters could offer flexibility to the system, turning up or turning down to manage grid constraints and to use renewable electricity when it is plentiful and cheap. Insulated hot water tanks mean water can be heated at any hour to be used later.

Once it is clear what technology and interventions are needed in order for households with night storage heaters and immersion tanks, energy providers should be encouraged to enable vulnerable customers to access these at reduced cost (potentially through programmes such as ECO4).

Flexibility offered by smart technologies

The added flexibility that all smart technologies can provide will be crucial in reducing pressures on the grid and will be essential to the wider acceptance and use of ToU tariffs. However, there is a growing trend that the market is developing flexibility products for those high usage customers (such as EV drivers, battery owners and owners of rooftop solar) who are able to shift the largest loads and from whom the most profit can be obtained, with smaller flexibility products, that are more affordable to those on low incomes, being neglected.

These small smart technologies include; smart heating controls, smart plugs and light bulbs, timer plugs and household appliances which have integrated smart controls (washing machines, dishwashers, and tumble dryers).

Equity in the adoption of smart technology

The affordability of current smart technologies, such as EVs, are a barrier for people on low incomes, with the current average cost of an electric vehicle coming to £50,000 (Nimble Fins, 2023 & Octopus Energy 2022) and battery storage ranging between £1,500 - £5,000 (Which?, 2024). Furthermore, low-income households are unlikely to be able to afford the £300 per month needed to lease an EV. It is therefore important to consider whether if the default tariff changed from the current standard rate to a variable one, low-income households would be excluded from engaging fully with the tariff. They may be forced to continue to use energy during 'peak' times because they do not have access to technology that facilitates off peak time usage.

Smaller smart technologies used by households may not create significant reductions in household energy usage in comparison to large smart technologies (EVs, immersion heaters etc). However, they might make it easier for households to be flexible in their use of electricity in a way which does not require changing to a dynamic ToU tariff. It would also allow for full participation and usage of a dynamic tariff and does not require an in-depth knowledge of the functions of the energy market. In the same way populist nature documentaries can create interest in wider environmental issues, smaller smart technologies have the capacity to provide an entry point to changing energy habits for those who have no prior knowledge and experience. This will be important in maximising the proportion of the population flexing their demand and help prepare the public for the point at which all electricity is priced dynamically, a likely long-term outcome.

Despite their comparable affordability to other smart technologies, it would still require some investment on the part of the householder to purchase and have these technologies installed in their home (e.g. smart heating controls installed and connected to boiler) or purchase the technology that controls them (e.g. smart phones and tablets to use the apps that control them). We would therefore wish to see additional funding for low-income households specifically for smart technologies both large and small. Vulnerable customers in fuel poverty would benefit most from offering the value of their flexibility to the system through the use of ToU tariffs combined with smart technology. Government should monitor the differential impacts of flexibility products coming to market, to ensure they are not left behind.

12. We do not believe that evolutions in default tariff types is likely to have significant impacts on households' ability to use or export power they generate at home with equipment like rooftop solar panels. Do you agree? If not, why?

It would be helpful if a future impact assessment included some modelling to explore the impact of ToU tariffs on export rates for consumers. Our expectation would be that more householders being on a dynamic ToU tariff would lead to increased demand during the daylight off-peak hours and therefore an increase in the export price of energy. This would be positive in terms of reducing individual customers bills, balancing the grid, alleviating grid constraints, and making rooftop solar panels more affordable and attractive to consumers. However, we would like to see an impact assessment to confirm this.

One unintended consequence of an increase in dynamic ToU tariffs users might be that it would incentivise householders to purchase home batteries in order to store energy and sell back to the grid at peak times. Consideration should be given to the environmental impact of battery production, especially when compared with other lower tech forms of flexibility with no additional embodied carbon, such as charging night storage heaters or immersion water heaters flexibly.

Default tariffs when fixed-term tariffs for low-carbon technologies end

13. If an electric vehicle owner has chosen a specific tariff, do you believe they could face a detriment if they default onto a different tariff structure at the end of the fixed term?

Yes, if they were on a tariff that charged their car when the prices were low then moving onto a non-dynamic tariff would likely be more expensive and no longer incentivise off-peak charging.

14. How should (a) suppliers and (b) load controllers protect domestic electric vehicle owners who have previously chosen a specific tariff and charging structure, when the fixed term ends? Should there be a rule or principle encouraging default arrangements to maintain some consistency of tariff type when a fixed term ends? Is there a case for electric vehicle (EV) tariffs to be evergreen or rolling fixed terms?

EV tariff options to ensure EV owners remain on a dynamic ToU tariff

The simplest solution would be for EV tariffs to be evergreen, which is already the case for Ovo, Octopus and Good Energy's EV tariffs. This means that any consumers already on an EV tariff would not be at risk of moving from this tariff due to inactivity (not signing up to a new tariff when their current one ends).

If a rolling tariff is not possible, we would recommend an automatic default to a dynamic EV default tariff.

The price level of future default tariffs

15. Should the current default tariff cap be either reformed or replaced with more flexible price regulations as we transition to MHHS? If so, when in the transition to MHHS do you believe that change should take place?

Our recommendations for tariff caps on default tariffs

For all future default tariffs, we would recommend that Ofgem continues to publish detailed tables and guidance that show all the costs and how they are calculated. The default tariff cap has improved transparency in the energy system and helped to rebuild some trust in the energy market. We would therefore support it continuing as is for the standard variable tariff.

For the static ToU tariffs, we would recommend peak and off-peak caps being set by Ofgem rather than suppliers. Given the freedom to choose we have seen energy suppliers set unfairly high day rates.

For a dynamic default ToU tariff we would recommend a cap on the maximum per kwh rate as well as the average rate in a 24hr period, to ensure that customers are not financially exposed to excessively high rates.

16. Do default price regulations need to support a greater diversity of tariff types to help secure lower long-term bills and meet households' different energy needs? If so, how might this best be achieved?

As previously explained, we believe adding a static ToU default tariff and dynamic EV ToU default tariff to the current standard and Economy 7 default tariffs would help to secure lower long-term bills and meet households' different energy needs.

The future regulation of default gas tariffs

17. If price protections for default electricity tariffs are reformed in future, do you believe that regulations for default gas tariffs should also be updated?

We would support price protections to stay in place for default gas tariffs as well as default electricity tariffs as many people in fuel poverty rely on gas for their heating and hot water. We are not aware of any need for ToU gas tariffs to be introduced. We would welcome a social tariff which covers both gas and electricity use.