Consumer Scotland Energy Demand Flexibility research

Survey report by Ipsos

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Executive summary

Background and methodology

Scotland's electricity system is changing rapidly as more renewable energy is connected to the grid, often in locations much further from large population centres than traditional fossil fuel power stations are. This can increase costs for consumers – either more network needs to be built to accommodate the new generation, or some generators need to be paid to switch off while others elsewhere are paid to ramp up, or a combination of the two. One way of mitigating this is to incentivise households to reduce electricity use during peak periods, such as mornings and evenings, and shift usage to other times. Energy suppliers and the National Energy System Operator (NESO) have already started to take forward measures to help achieve this. These initiatives form part of the UK Government's wider drive to encourage consumer-led flexibility and support its clean power and net zero ambitions.

Consumer Scotland's Energy Demand Flexibility Survey aims to understand the ability and capacity of different domestic electricity customers to adjust their usage. It also seeks to assess the Scottish public's ability to engage with and assess the distributional impacts of flexibility products and services. The research was designed to enable Consumer Scotland to identify groups of consumers who are likely either to benefit from or be disadvantaged by consumer-driven energy flexibility policies and Time of Use tariffs.

The survey was conducted through Ipsos' Scottish Omnibus online survey panel. To ensure a representative sample of Scotland's population, quotas were set based on age, gender, region, and employment status. Fieldwork took place between 20th February and 3rd March 2026, yielding a representative sample of 1,094 domestic energy consumers in Scotland. Targeted boost samples were included for lower-incidence groups, specifically those in private rented accommodation and those using electricity as their primary heating source.

Distributional analysis was undertaken to estimate the potential impacts of Time of Use tariffs across different types of households. This combined respondents' reported appliance use and willingness to shift electricity use to off-peak periods with different tariff types.

Overview and GB-wide comparisons

Overall, Scottish consumers show willingness to engage with demand-side flexibility and shift electricity use away from peak periods when there are clear incentives to do so. However, the research also highlights important barriers that may limit participation for many households, including confusion about existing energy arrangements and tariffs, concern over automation or handing over control to other parties, uncertainty about financial benefits, practical household constraints, and the cost of enabling technologies. As a result, flexibility is likely to offer significant benefits for some consumers, while remaining less feasible or less desirable for others.

There is meaningful potential to shift electricity demand away from peak periods. Based on reported behaviours and willingness to flex, households could shift an average of around 122 kWh of annual appliance electricity use to off-peak times. Future uptake of technologies such as electric vehicles and heat pumps is likely to increase this potential further.

However, access to the low carbon technologies that support demand-side flexibility is not evenly distributed across the population. The 16% of consumers with high capability to engage with flexibility services were more likely to be younger, male and living in households with children, while the 27% with emerging capability to engage with such services were more likely to have higher incomes, degree-level qualifications and to be owner-occupiers. A majority of consumers (57%), however, currently have lower capability to engage with flexibility services, based on this group's limited current ownership of, and lower likelihood of intending to adopt, low carbon technologies. Consumers in this group were more likely to be older, female, and living in lower-income households without children.

This indicates that for many consumers demand-side flexibility will be neither possible nor desirable. For this group, remaining on a fixed rate tariff will be an appropriate choice. For others, however, there are savings available if they receive sufficient information, encouragement and reassurance, as well as increasing their uptake of the low carbon technologies that enable demand flexibility.

Overall, the findings from this survey largely align with Ofgem's Flexibility and Net Zero Survey (FANZ) carried out in 2025 which covered Great Britain and used a similar methodology. Both studies found substantial willingness to use energy flexibly, but uptake of the technologies and tariffs that enable flexibility remain limited and is constrained by cost, uncertainty and practical barriers for many.

Consumer adoption of smart meters and Time of Use tariffs

Smart meters and Time of Use tariffs are key enablers of demand-side flexibility, providing the information, pricing signals and billing arrangements needed for consumers to shift electricity use away from peak periods and benefit financially from doing so. The survey findings indicated that

smart meter adoption appears to be continuing to grow, with the majority of respondents (85%) either having one, waiting for installation, or considering getting one. However, adoption remains lower among older consumers and those living in rural areas, which may limit access to some flexibility services.

Uptake of Time of Use tariffs remains limited, with only a minority of respondents saying that they were on such tariffs. While over a third of respondents (37%) believed that the cost of their electricity varied by time of day, many were unable to identify the type of tariff they were on, suggesting considerable confusion about or lack of engagement with tariff structures. There was notable hesitation among consumers about switching to Time of Use tariffs in the future with uncertainty about potential savings emerging as a key barrier (mentioned by 15-24% across three different statements focused on perceptions around savings). These findings suggest that improving consumer understanding of tariff options and their financial implications may be important for wider adoption.

Use of low carbon and flexibility products

While there was general willingness to use products that helped reduce carbon emissions (55%), particularly among younger and more educated respondents, only a small minority (21%) identified as early adopters of new technology.

Ownership of low carbon and flexibility-enabling technologies (including EVs and plug-in hybrid vehicles, heat pumps, solar panels, home battery storage, smart heating controls and storage heaters[1]) remains relatively limited. Smart heating controls represented the most common low carbon technology currently in use (24% reported using smart heating controls), particularly among higher-income households. EVs and heat pump adoption remained low with 11% reporting they owned an EV and 5% a heat pump, though younger and more affluent households showed a greater likelihood of adopting these technologies in the near future. Solar panels showed moderate adoption (12%), especially in rural areas and among owner-occupiers.

Cost emerged as the primary barrier across all low carbon technologies, both in terms of purchase price and running costs. Knowledge gaps also presented significant barriers. For heat pumps specifically, concerns about home disruption (mentioned by 27%) and necessary property improvements (29%) created additional obstacles to adoption.

The analysis identified three distinct consumer groups reflecting current ownership and intended adoption of low carbon technologies.

[1] These were chosen given that they enable consumers to shift electricity demand away from peak periods, and as such are expected to play a major role in the net zero transition.

Consumer typology groups

Group	Proportion	Characteristics
Low capability	57%	Limited ownership and intention to adopt flexibility-enabling technologies
Emerging capability	27%	Some ownership or future adoption intentions
High capability	16%	Strongest access to flexibility-enabling technologies

The majority of consumers (57%) fell into a Low Capability group, reflecting limited current ownership of, and intention to adopt, low carbon technologies. Consumers in this group were more likely to be older, female, and living in lower-income households without children. High Capability consumers (16%) were commonly younger, male and living in households with children, whereas Emerging Capability consumers (27%) were more likely to have higher incomes, degree-level qualifications and to be owner-occupiers. These findings indicate that access to technologies that support demand-side flexibility is not evenly distributed across the population.

Willingness and ability to flex household energy use

The survey looked at respondents' current reported energy use behaviour and their potential to shift use to off-peak periods across three domestic appliances: washing machines / combined washer dryers, tumble dryers and dishwashers. These were chosen to represent current opportunities for flexibility in commonly owned domestic appliances that account for a significant portion of overall household electricity use.

A majority of washing machine, dishwasher and tumble dryer users expressed a hypothetical willingness to shift usage to off-peak times when presented with potential savings. The level of financial incentive strongly influenced willingness to change behaviour, with most users being willing to shift for higher annual savings. Notably, some users indicated willingness to shift usage even without financial incentives (16% of peak time users said they would be willing to move their washing machine use to 'off peak' times for no financial incentive), suggesting opportunities for public education about the broader benefits of shifting energy usage to off-peak times.

Practical barriers to shifting significantly limited flexibility potential for many households. These included incompatibility with household routines, noise concerns, and safety worries, particularly in relation to tumble dryer use. Households with children were more likely to currently use appliances during peak times, though many expressed willingness to shift if appropriately incentivised.

Automation presented a significant challenge, with most respondents expressing discomfort about third-party management of their household energy use. Electric vehicle owners showed notably greater openness to automated charging management compared with users of other appliances (half (51%) of EV owners said they would be comfortable with a company managing when their vehicle charges compared with 19% of users of other appliances who would be

comfortable with third party management of home heating). Younger respondents and High Capability consumers demonstrated greater comfort with automation concepts.

Estimating flexibility potential and impact

Analysis was undertaken to estimate the potential benefits of Time of Use tariffs and shifting electricity use away from peak periods, based on respondents' reported appliance use and stated willingness to move some energy consumption to off-peak times. The analysis focused on washing machines, tumble dryers and dishwashers.

The findings suggest that 58% of consumers would be better off financially on a Time of Use tariff based solely on their reported patterns of washing machine, tumble drier and dishwasher use. This could rise to 84% when consumers' stated willingness to shift appliance use to off-peak periods is taken into account, indicating scope for consumer-led flexibility to support both household savings and wider energy system objectives.

The benefits of Time of Use tariffs appear to be broadly distributed across the population, although the scale of potential gains and risks varies between different groups. High Capability consumers with greater access to low carbon technologies and flexibility-enabling products, such as smart meters, appear particularly well positioned to benefit. Lower-income households may also stand to make meaningful savings relative to their household income, although they could face greater financial risks where a Time of Use tariff is not the most suitable option. However, a minority of consumers would remain better off on a fixed-rate tariff, highlighting the importance of clear information, advice and support to help households identify the most appropriate tariff for their circumstances.

The analysis also indicates that there is meaningful potential to shift electricity demand away from peak periods. Based on reported behaviours and willingness to flex, households could shift an average of around 122 kWh of annual appliance electricity use to off-peak times. By extending this to the wider Scottish population, this could amount to an estimated overall annual shift of 305 GWh from peak to off-peak hours which is around 3.6% of the total annual domestic consumption in 2024.[2] Future uptake of technologies such as electric vehicles and heat pumps is likely to increase this potential further.

Energy saving events

Awareness of energy saving events was moderate, with around six in ten respondents knowing at least something about these before taking part in the survey. Among those aware, less than half

[2] Energy Consumption Statistics for Scotland Q3 2025 https://www.gov.scot/publications/energy-statistics-for-scotland-q3-2025/pages/electricity-consumption/

had participated, with most of these respondents having taken part in an event within the last year.

Consumers reported various behavioural changes during energy saving events, including both reducing and increasing appliance use depending on the event type. Common adjustments included modifying the frequency of use of washing machines, heating, and ovens.

Key barriers to participation included perceptions that energy suppliers did not offer such events, lack of knowledge about how they worked, and uncertainty about financial benefits. These findings suggested opportunities to improve supplier communication and clarity for consumers about the value proposition of energy saving events.

Glossary of terms

Demand-side flexibility	Demand-side flexibility means consumers being able to shift the consumption of electricity at peak times (e.g. through 'smart charging' an electric vehicle, or time-shifting usage of other electricity use), offsetting new grid and generation capacity needed across the system.
Electric vehicle	Electric vehicles use electric motors to drive their wheels. They derive some or all their power from large, rechargeable batteries. In this survey we focus on fully electric or plug-in hybrid cars or vans which are plugged-in and charged. Because charging can often be scheduled to take place at off-peak times, electric vehicles can provide households with greater opportunities to shift electricity use and benefit from Time of Use tariffs.
Heat pump	A specific type of electric home heating which extracts heat from the outside environment, such as the air or ground, and uses it to heat the home. Heat pumps can support demand-side flexibility by allowing some heating demand to be shifted to off-peak periods through the use of timers, smart controls or pre-heating, helping households take advantage of lower electricity prices.
Home battery	A large battery which allows storing electricity for later use. Common brands include GiveEnergy All in One Battery and Tesla Powerwall. Home batteries can support demand-side flexibility by storing electricity during off-peak periods and using it later, helping households shift electricity consumption away from peak times and benefit from Time of Use tariffs.
Low carbon technologies	Low- carbon technology products produce less carbon dioxide than their traditional energy counterparts. Products covered in this survey include EVs, solar panels, home battery storage, smart heating controls and heat pumps.
Net zero	Scotland's climate change legislation sets a target date for net zero emissions of all greenhouse gases by 2045. This means that the total greenhouse gas emissions would be equal to the emissions removed from the atmosphere, with the aim of limiting global warming and resultant climate change.
Owner-occupiers	A respondent who either owns their home outright or has bought their home with a mortgage.

Peak/off-peak times	In this study, off-peak electricity times are defined as between 10pm and 8am or between 11am and 4pm and peak times as 8-11am and 4-10pm.
SIMD areas	The Scottish Index of Multiple Deprivation (SIMD) looks at the extent to which an area is deprived across measures including income, employment, education, health, access to services, crime and housing. References to most and least deprived areas are based on the Scottish Government's SIMD 2020 quintiles, where SIMD area 1 includes the most deprived areas and SIMD area 5 includes the least deprived areas.
Social grade	This refers to a social grade classification, commonly used in social research, that was used in the survey weighting. Broadly speaking, the groups ABC1 correspond to professional, managerial and clerical occupations and groups C2DE refer to skilled-manual occupations, unskilled manual occupations and the economically inactive.
Solar panel	Solar panels, or photovoltaics (PV), convert the sun's energy into electricity. By generating electricity on-site, solar panels can reduce the amount of electricity households need to purchase from the grid. When combined with technologies such as home battery storage or flexible appliance use, they can help households make greater use of electricity outside peak periods.
Smart meter	A device that records electricity consumption in intervals and communicates the information to the energy supplier for monitoring and billing. Smart meters enable access to many demand flexibility products and services, including some Time of Use tariffs, by providing detailed information about when electricity is used.
Smart heating controls	Smart heating controls are devices that enable users to programme their boiler or heating system online/by smart phone.
Storage heater	Electric heater that generates and stores heat during the night and releases the heat when needed e.g. to warm your home during the day. By storing heat produced during off-peak periods for later use, storage heaters can help households shift electricity demand away from peak times and benefit from Time of Use tariffs.
Time of Use (ToU) tariffs	Electricity tariffs where the cost of electricity is cheaper at certain times of day.

Urban / rural areas	Reference to urban and rural areas are based on the Scottish Government's 2-fold and 6-fold Urban Rural Classification 2022.

1 Background, aims and methodology

1.1 Background

Scotland's electricity system is changing rapidly as more renewable energy is connected to the grid, often in locations much further from large population centres than traditional fossil fuel power stations are. As part of the energy transition to net zero, there is huge potential for consumers to play a role in reducing system costs by shifting and flexing their energy demand and reducing consumption at peak periods of the day.

Market changes are expected to accelerate this behaviour. Smart meters and new arrangements are enabling suppliers to offer more Time of Use tariffs, where electricity prices vary by time of day. These tariffs are likely to become increasingly common and could eventually become the default option for customers.

The Energy Demand Flexibility Survey was commissioned by Consumer Scotland in November 2025. The survey aims to gain an understanding of different domestic electricity customers' ability and capacity to flex their energy use, as well as the Scottish public's ability to engage with flexibility services. This is intended to enable Consumer Scotland to identify groups of consumers who are likely to benefit or lose out from consumer-led energy flexibility policies and Time of Use tariffs and so provide a robust evidence base for their advocacy work on consumers' behalf.

The research sought to address the following research questions:

Understanding Scottish domestic energy consumers' ability and capacity to engage with flexibility services:

- Which types of consumers are currently using flexibility products, services and technologies (smart meters and devices, Time of Use tariffs, etc), and how are they using them?
- What barriers do different types of consumers face to shifting or reducing their energy consumption and benefitting from flexibility products and services?
- How 'shiftable' is consumers' electricity consumption, and how dependent is that on price incentives?
- What are the drivers of willingness and ability to demand shift?

Assessing the distributional impacts of flexibility policies and Time of Use tariffs:

- Which types of Scottish households would benefit or lose out from Time of Use tariffs assuming no behaviour change, and by how much?

- Pragmatically, what steps would consumers need to take to 'flex' their energy consumption sufficiently to benefit?
- How willing/able are different types of households to shift that amount of demand?
- What level of incentives and type of support would be necessary to enable different types of consumers to flex their demand sufficiently to benefit from Time of Use tariffs?

The research directly supports Consumer Scotland's role in advocating for fair and transparent energy markets. It was designed to equip Consumer Scotland with the robust, Scotland-specific evidence needed to shape the energy flexibility transition in ways that benefit all Scottish consumers.

1.2 Research design

Ipsos developed the survey questions in collaboration with Consumer Scotland, drawing on previous work done on the topic, including Ofgem's Flexibility and Net Zero Survey carried out in 2025.

The survey was carried out via Ipsos' Scottish Omnibus online panel survey. To ensure a representative sample of the population in Scotland, quotas were set on age, gender, region and working status.

Fieldwork was carried out between 20th February and 3rd March 2026. A nationally representative sample of 1,094 domestic energy consumers in Scotland was achieved. This included targeted boost samples of lower-incidence groups (those privately renting as well as those using electricity as their main heating source), to achieve sufficient sample sizes for lower-incidence subgroups of interest.

Weighting was applied to the data after fieldwork ended to correct any imbalances in the achieved sample, using the latest official Scottish population statistics. The weighting approach was designed to ensure that the sample's distribution on key variables matched the population statistics by gender, working status, parliament region, social grade, education and tenure.

Distributional analysis was also undertaken to assess the potential distributional impacts of Time of Use tariffs. Using respondents' reported appliance use and willingness to shift use to off peak periods, estimates were produced of the proportion of households who may be financially better or worse off on a Time of Use tariff, both before and after shifting energy use to off-peak periods. Outcomes were examined across a range of consumer groups, including by income, tenure, age, household composition and flexibility capability.

1.3 Presentation and interpretation of the data

The survey findings represent the views of a sample of respondents, and not the entire population of Scotland, so they are subject to sampling tolerances, meaning that not all differences will be statistically significant. Throughout the report, differences between sub-groups are commented

upon only where these are statistically significant, i.e. where we can be 95% certain that they have not occurred by chance.

Where percentages do not sum to 100%, this may be due to computer rounding, the exclusion of 'don't know' categories or questions where respondents are able to provide multiple answers. Throughout the report, an asterisk (*) denotes any value of less than half a percent and a dash (-) denotes zero. Aggregate percentages (e.g. "very satisfied/fairly satisfied") are calculated from the absolute values. Therefore, aggregate percentages may differ from the sum of the individual scores due to rounding of percentage totals. For questions where the number of residents is less than 30, the number of times a response has been selected (N) rather than the percentage is given.

Respondents were asked a number of questions about their current home heating source(s) and energy bills which have not been included in the main body of the report in the interest of length. The findings from these questions are included in Appendix A.

2 Consumer adoption of smart meters and Time of Use tariffs

Overview of findings

This section explores the adoption of key demand-led flexibility enablers such as smart meters and Time of Use tariffs.

- Engagement with smart meters remains relatively high: 85% of respondents said they either had one, were waiting for one to be installed, or would consider getting one in future. Still, 15% said they do not have a smart meter and would not consider getting one.
- Uptake of Time of Use tariffs was limited. Over a third (37%) of respondents report that their energy costs vary by time of day, but many are unable to identify the exact tariff or meter type they are on. There is considerable hesitation to switch to a Time of Use tariff, for reasons such as uncertainty about the financial benefits of participation. This suggests that improving consumer understanding of tariff structures and potential benefits may be necessary before wider adoption can occur.

2.1 Smart meter adoption

Smart meters are the foundational, data-driven technology which is expected to facilitate demand-led flexibility, allowing households to shift electricity usage away from peak times. The smart meter rollout is key in allowing suppliers the means and motivation to offer customers more innovative Time of Use tariffs that charge different amounts for energy use at different times. There is an expectation that this type of arrangement will become more commonplace and may even become the default tariff type in due course.

Uptake of smart meters in Scotland has been lagging behind elsewhere in the UK, with official estimates[3] from 2026 showing that 71% of households in Scotland have smart meters installed, compared with 74% GB-wide. This is more acute in local authorities in the Highlands and Islands, particularly the Shetland Islands, Orkney, Na h-Eileanan Siar and Argyll and Bute, creating fundamental barriers to accessing flexibility services.

A majority of survey respondents (67%) said that they already had a smart meter, similar to the official estimates of 70%. This is also in line with the findings from Ofgem's FANZ survey.[4] Overall, seven in ten (70%) respondents either had a smart meter or were waiting to have one installed, and

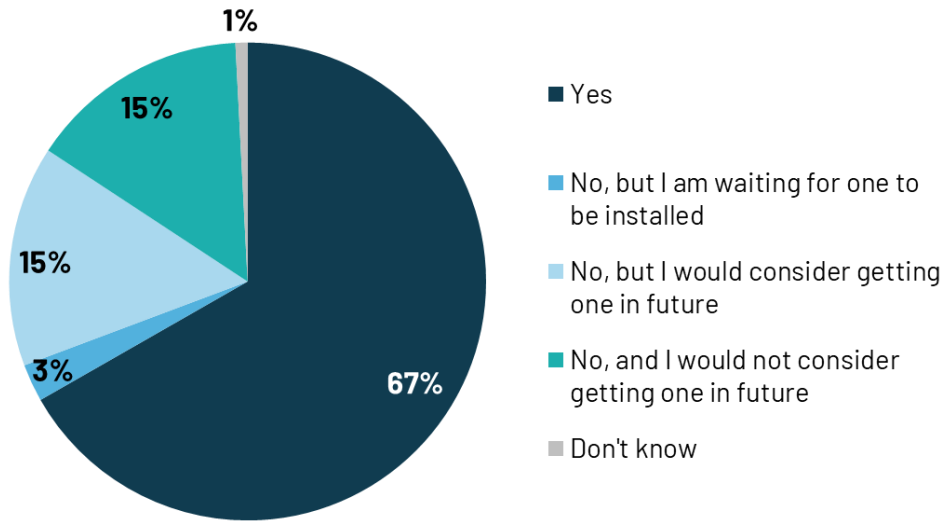
[3] Smart Meter Statistics in Great Britain, March 2026 Smart meters in Great Britain, quarterly update March 2026 - GOV.UK

[4] Two-thirds of FANZ survey respondents (68%) say they have a smart meter. https://www.ofgem.gov.uk/sites/default/files/2026-05/Flexibility-and-Net-Zero-Survey-Findings-Report-2025.pdf p. 23

15% would consider getting one in the future (Figure 2.1). This indicates that smart meter adoption is likely to increase further in Scotland in future.

Figure 2.1: Household smart meter adoption

Q: Does your household have a smart meter, or not?



Base = 1094
ALL RESPONDENTS WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS

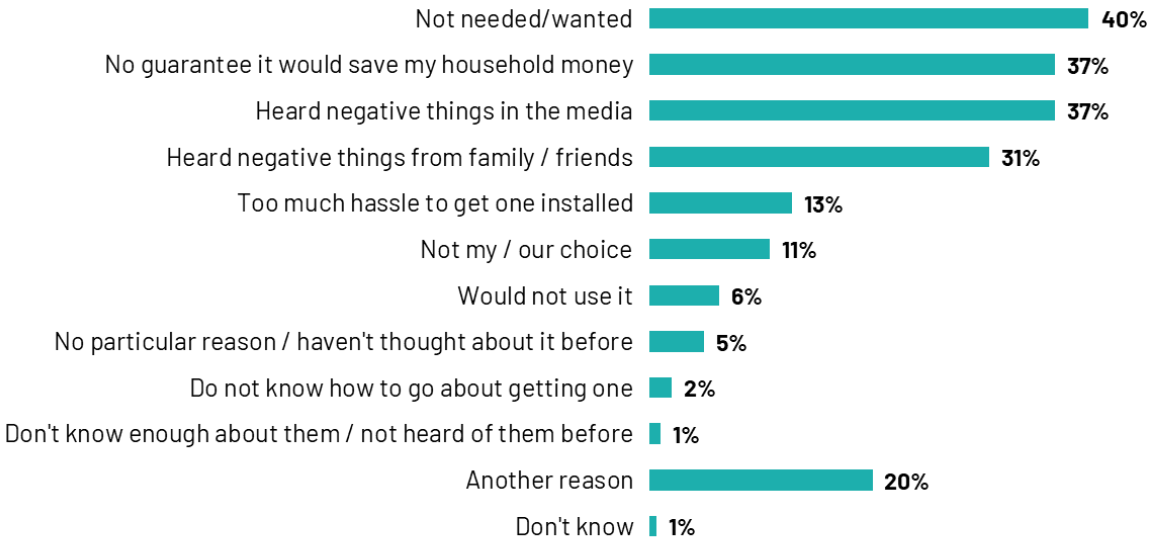
However, 15% of respondents said they do not have a smart meter and would not consider getting one in the future. This reluctance was more pronounced among those living in rural areas (26%, compared to 13% in urban areas) and older respondents aged 55 and above (22%, compared to 10% of younger respondents).

In terms of region, people living in the Highlands and Islands were more likely than average to say they did not currently have a smart meter (44%, compared to 32% overall), with 27% saying they would not consider getting one in future (compared to 15% overall).

As shown in Figure 2.2, the main barriers to adoption among those who said they would not consider getting a smart meter were that a smart meter was not needed or wanted (40%), they were not convinced that it would save their household money (37%) or that they had heard negative things about them in the media (37%) or from family and friends (31%).

Only 13% cited practical concerns, saying that it would be too much hassle to get one installed.

Figure 2.2: Main reasons for not getting a smart meter in future



Base = 157
ALL RESPONDENTS WHO WOULD NOT CONSIDER GETTING A SMART METER IN FUTURE

2.2 Time of Use tariffs

Time of Use tariffs are expected to play a key role in consumer demand-led energy flexibility, by incentivising consumers to shift energy usage away from expensive peak times towards cheaper, off-peak periods when low carbon energy generation may be available. They have the potential to help reduce system costs, mitigate peak demand on the grid, and support the integration of low carbon technologies such as electric vehicles and heat pumps.

2.2.1 Uptake of Time of Use tariffs

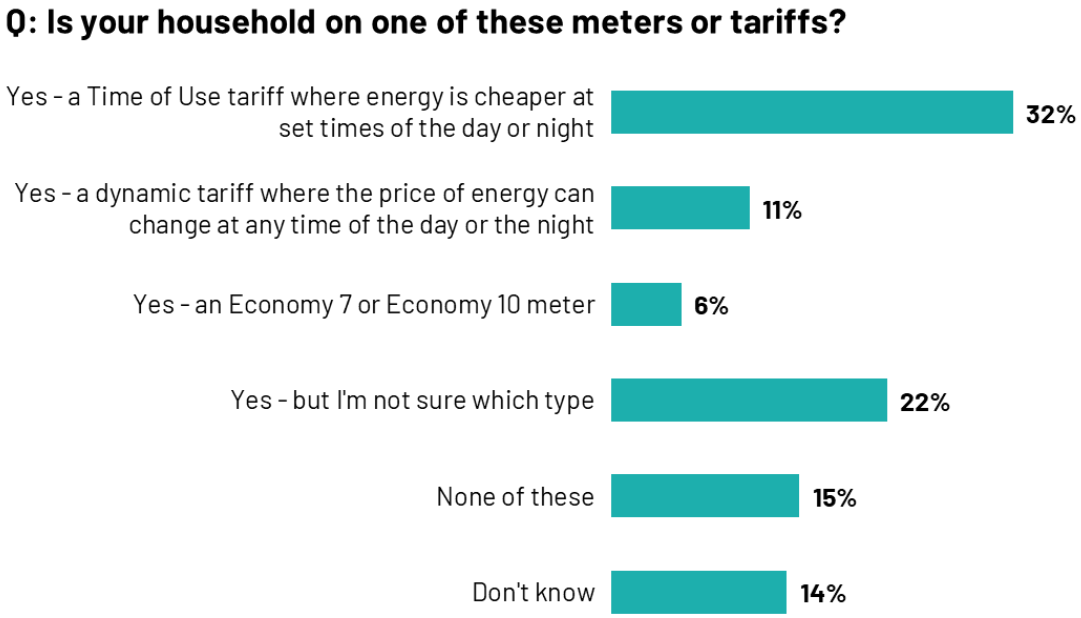
Uptake of Time of Use tariffs was limited. Just over a third (37%) of respondents thought that they paid different amounts for their energy depending on when they used it, while half (49%) thought they were paying the same amount regardless of when they used energy. Recent research suggests that 14% of households in the UK are on a Time of Use tariff. The higher proportion reported in this survey (37%) may reflect confusion among respondents about different tariff types. [5]

Respondents who said that they pay different amounts for energy depending on the time of energy use were asked to identify which meter or tariff they were on. Time of Use tariffs where energy is cheaper at set times of the day or night were the most commonly mentioned, by 32%. Further to this, 11% thought that they were a dynamic tariff where the price of energy can change at any time of the day or the night. However, 22% could not identify the tariff type or meter they were on, while 14% did not know their tariff type (Figure 2.3). These findings suggest a degree of confusion around the different tariff and meter types. Similar uncertainty was also evident in Ofgem's FANZ

[5] Beyond Tariffs: GB household flexibility market monitor, December 2025 https://insights.lcp.com/rs/032-PAO-331/images/LCP-Delta-Beyond-Tariffs-GB-household-flexibility-propositions-Dec-2025.pdf

survey, where 32% thought that their energy prices vary by time of use, but only 16% could identify their specific Time of Use tariff.[6]

Figure 2.3: Type of Time of Use tariff



Base=427
ALL RESPONDENTS WHO PAY DIFFERENT AMOUNTS FOR ENERGY DEPENDING ON TIME OF DAY/WEEK

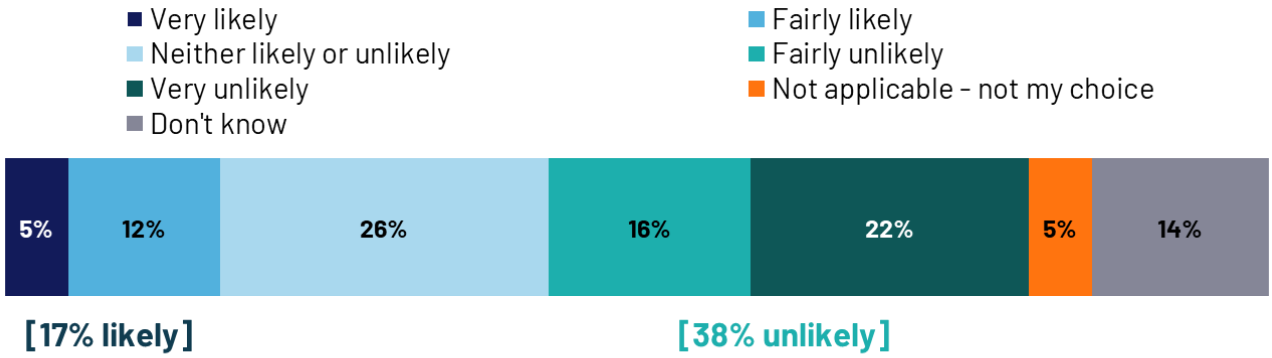
2.2.2 Likelihood to switch to a Time of Use tariff in future

The stated likelihood of moving to a Time of Use tariff in future was low among those currently not on these tariffs. Just 17% saw themselves as very or fairly likely to move to a Time of Use tariff in the next two years, while 38% said that they were unlikely to do so (Figure 2.4).

Meanwhile, four in ten respondents (40%) were unsure or undecided about switching to a Time of Use tariff - a quarter (26%) said they were neither likely nor unlikely to switch, while a further 14% said they did not know. This suggests there is an opportunity for further information provision and public engagement about the potential benefits of switching to a Time of Use tariff.

[6] Ofgem Flexibility and Net Zero survey 2025 findings report p.25 https://www.ofgem.gov.uk/sites/default/files/2026-05/Flexibility-and-Net-Zero-Survey-Findings-Report-2025.pdf

Figure 2.4: Likelihood to switch to a Time of Use tariff in the next two years



Base = 626
ALL RESPONDENTS WHO DO NOT HAVE A TIME OF USE TARIFF

Groups who were particularly unlikely to switch included:

- Those in rural areas (48% said they were fairly or very unlikely to switch, compared to 36% in urban areas).
- Owner occupiers (42%, compared to 25%[7] of renters).
- Households without children (41%, compared to 29% with children).

2.2.3 Barriers to switching to a Time of Use tariff

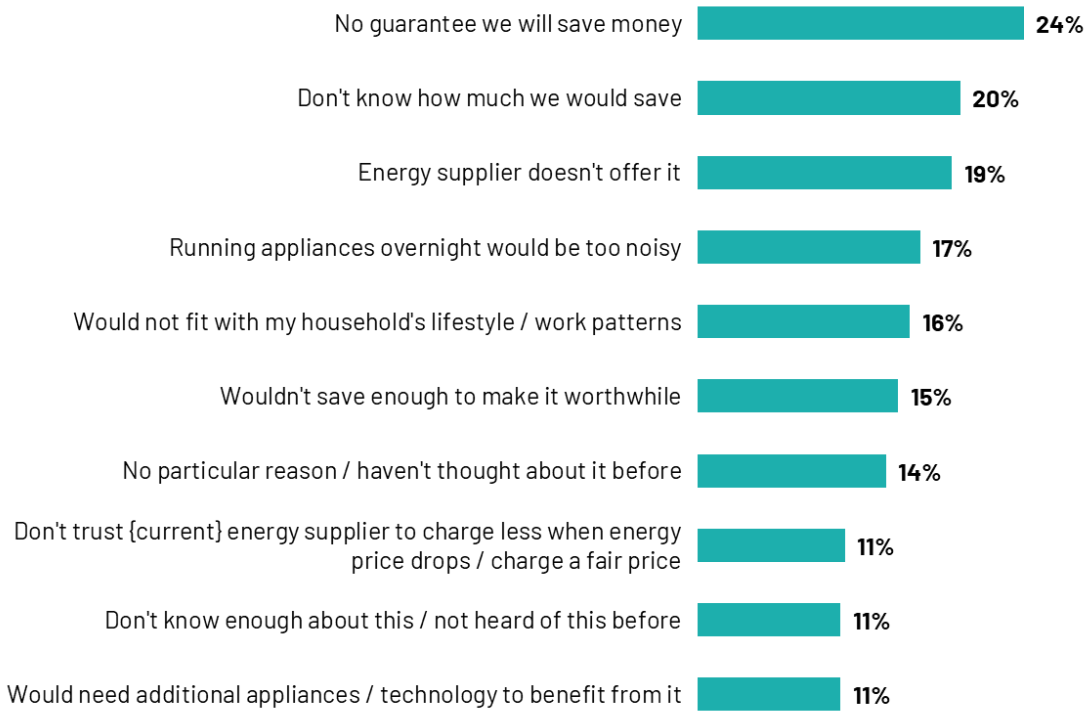
As shown in Figure 2.5, the main barriers to switching to a Time of Use tariff were:

- Uncertainty about the financial benefits of participation – including perceptions that there is no guarantee they would save money (24%), they would not know how much they would save (20%) or they would not save enough to make taking part worthwhile (15%).
- Perceptions that their energy supplier did not offer Time of Use tariffs (19%).
- Noise concerns about running appliances overnight (17%).
- Incompatibility with household routines and patterns (16%).

In addition, one in ten (11%) said that they do not trust their energy supplier to charge less when the energy price drops, indicating there is a need for building confidence and highlighting transparency before Time of Use tariffs can become more mainstream.

[7] 21% of social renters and 31% of private renters.

Figure 2.5: Reasons why households would be unlikely to or have not switched to a Time of Use Tariff (top ten reasons)



Base =505
ALL RESPONDENTS WHO ARE UNLIKELY TO SWITCH TO A TOU OR WHO ARE LIKELY TO DO SO IN THE NEXT TWO YEARS

Older respondents aged 55 and above were more likely than younger respondents to cite concerns such as there being no guarantee they would save money (29%, compared to 19%), noise from running appliances overnight (24%, compared to 10%) and that the perceived savings would not be enough to make it worthwhile (21%, compared to 9%).

3 Use of low carbon and flexibility products

Overview of findings

This section examines consumer attitudes toward low-carbon technologies, current ownership levels, and the main barriers preventing wider adoption.

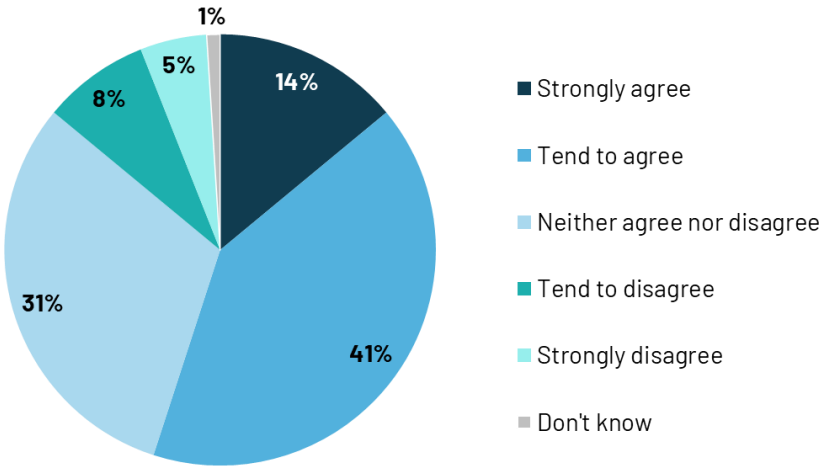
- More than half of consumers agreed their household wants to use products and services that help to reduce carbon emissions. Around one in five identified their household as 'early adopters', among the first to try a new technology when it comes on the market.
- Reported take up and use of low carbon products or products that help facilitate flexible energy use was fairly low. Smart heating controls were the most common, used by a quarter of respondents, while around one in ten had solar panels or an electric vehicle. Smaller numbers (around one in twenty) said they had storage heaters, home battery storage or a heat pump.
- A recurring theme across all technologies is that cost (purchase price and running costs) is the single greatest barrier to adoption. Demographics also play a key role, with younger and wealthier households consistently being more likely to own or consider purchasing these technologies.
- The analysis identified three distinct consumer groups based on ownership and intended adoption of low carbon technologies. Most consumers (57%) were classified as having Low Capability to engage with flexible energy use, and tended to be older, female, and living in lower-income households without children. High Capability consumers (16%) were more likely to be younger, male and more likely to have children, while Emerging Capability consumers (27%) were more likely to have higher incomes, degree-level qualifications and to own their homes. These findings suggest that access to and likelihood to adopt and use technologies that support flexible energy use are not evenly distributed across the population, with younger and more affluent households generally better positioned to participate in demand flexibility opportunities.

3.1 Attitudes towards low carbon technologies

The survey found a general willingness among respondents to engage with low carbon products. More than half (55%) agreed that their household wants to use products and services that help reduce carbon emissions. However, nearly a third (31%) had mixed views which may indicate a wider set of considerations which influence purchasing decisions (Figure 3.1).

Figure 3.1: Views on extent to which their household wants to use products/services that help reduce carbon emissions

Q: To what extent do you agree or disagree with the following statement: My household wants to use products and services that help to reduce carbon emissions.



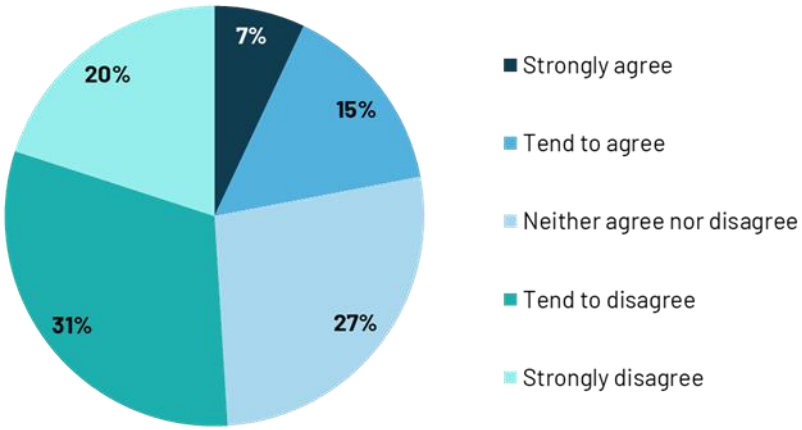
Base=1,094
ALL RESPONDENTS WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS

Graduates were more likely than non-graduates to agree that they want to use low carbon products and services (66% compared to 50%).

As shown in Figure 3.2, around one in five consumers (21%) identified their households as 'early adopters', who are among the first to try a new technology when it appears on the market. Conversely, half (51%) said their household was not among the first to try a new technology and 27% neither agreed nor disagreed with the statement.

Figure 3.2: Views on extent to which household is usually among the first to try a new technology when it appears on the market

Q: To what extent do you agree or disagree with the following statement: My household is usually among the first to try a new technology when it appears on the market.



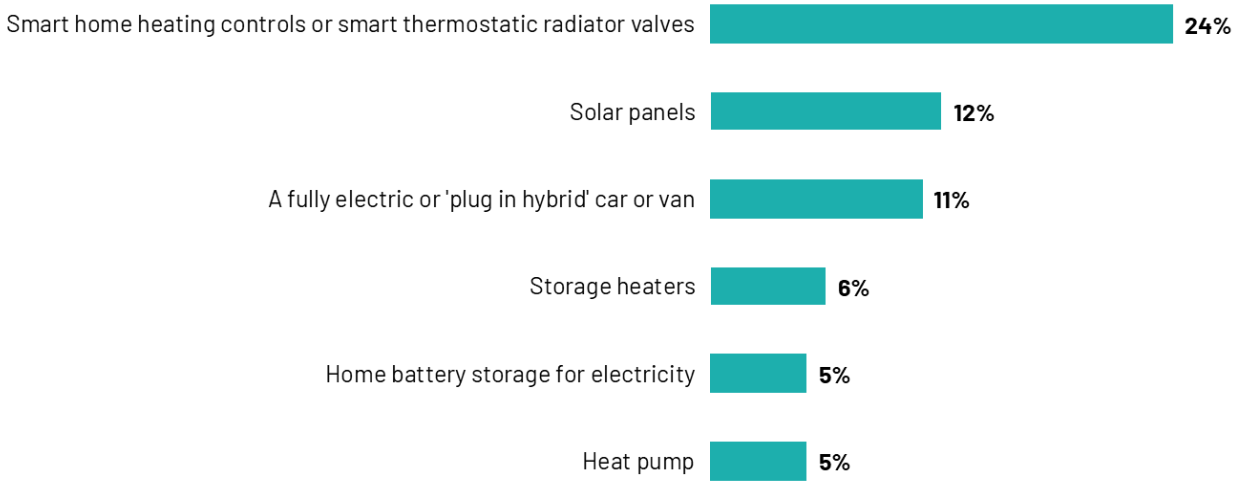
Base=1,094
ALL RESPONDENTS WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS

Respondents under the age of 35 were more likely than older respondents to see themselves as an early adopter of new technology (39%, compared to 17%).

3.2 Use of low carbon and flexibility products and barriers to uptake

Reported take up and use of low carbon products or products that help facilitate flexible energy use was fairly low and varied by product (Figure 3.3). Smart heating controls were the most common, used by a quarter of respondents (24%), while around one in ten had solar panels (12%). An electric vehicle or 'plug-in hybrid' car or van was used by 11% of the sample[8]. Smaller numbers said they had storage heaters (6%), home battery storage (5%) or a heat pump (5%).

Figure 3.3: Ownership / use of low carbon technologies and other technologies



Base=1094
ALL RESPONDENTS WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS

Findings related to the use and reported barriers to the uptake of each technology are discussed in more detail below.

3.2.2 Smart home heating controls

A quarter (24%) of respondents reported using smart heating controls, making it the most commonly used low carbon or flexibility-related product. Those more likely to own this technology included:

- High-earning households (earning £55,000 or more annually) - 38%, compared to 19% of lower income households.
- Households with children (35%, compared to 20% of households without children).

Older respondents aged 55 and above were among the least likely to use this technology (17%, compared to 29% of younger age groups).

[8] This is slightly higher than other estimates suggest (around 5%). https://www.gov.uk/government/statistics/vehicle-licensing-statistics-2025/vehicle-licensing-statistics-united-kingdom-2025

The primary reason given for not using smart heating controls was a lack of need or desire for this product (22%). This attitude was more prevalent among those aged 55 and above (28% compared to 17% of those under 55). Additionally, 18% stated that installation was not a decision they could make due to renting or other factors, and 13% said they had not got round to it yet (which indicates the potential for this group to do so in future). Meanwhile 12% said it would cost too much to purchase and install or cited a lack of knowledge about the technology.

3.2.3 Solar panels

Solar panels were used by 12% of households. Rural households were more likely to have solar panels (18%) compared to urban households (11%). Similarly, owner-occupiers (14%) were more likely than those renting (8%[9]) to use solar panels.

The cost of purchase and installation was the most cited barrier (34%) for solar panel adoption and use. Few respondents reported negative experiences (4%). Further, there is some potential for increasing awareness about this technology, as 9% said that they did not know enough about solar panels.

3.2.4 Electric vehicles (EVs)

EV ownership and likelihood to purchase in future

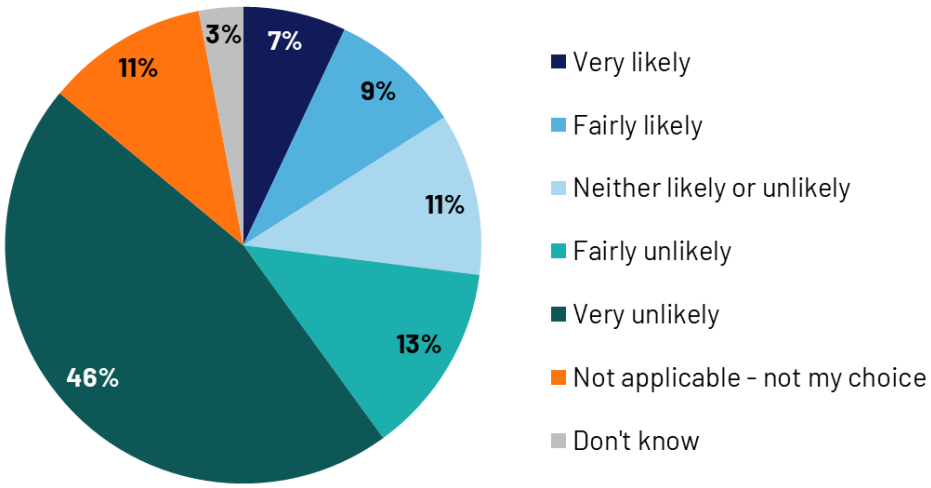
One in ten (11%) respondents reported their household having an (EV or a plug-in hybrid car. Higher income households (with an annual income of £55,000 or more) were more likely than lower income households to have an EV (19%, compared to 7%), as were respondents aged under 55 in comparison to older respondents (14%, compared to 7% aged 55 and above).

Only 16% of those who did not currently own an EV said that they were likely to purchase one within the next two years (Figure 3.4)

[9] 11% of social renters and 6% of private renters.

Figure 3.4: Likelihood to get a fully electric or plug-in hybrid vehicle in the next 2 years

Q: How likely are you to get or change to a fully electric or plug in vehicle in the next 2 years?



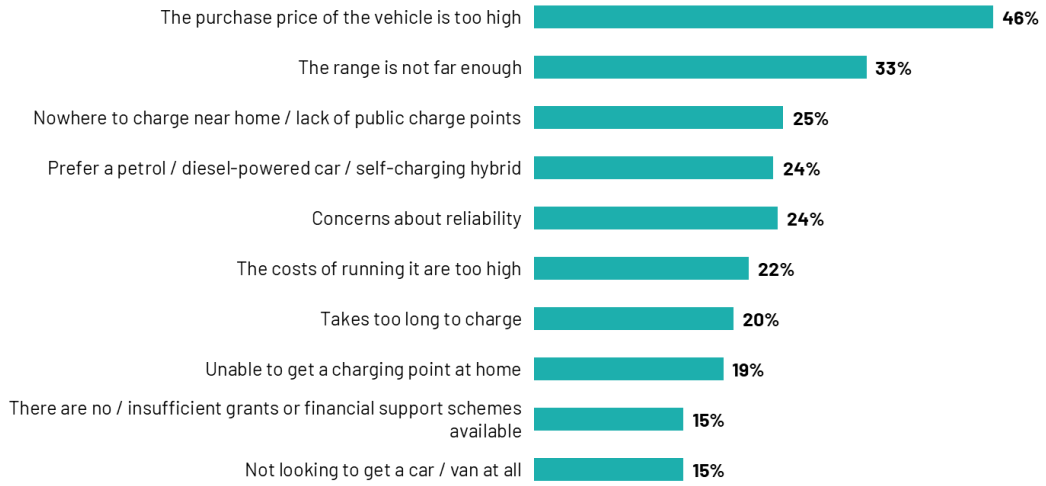
Base = 979
ALL RESPONDENTS WHO DO NOT HAVE A FULLY ELECTRIC OR PLUG-IN HYBRID VEHICLE

The following groups were more likely to say they are likely to get an EV in the next two years:

- Respondents aged under 35 (28%, compared to 12% of older respondents).
- Owners of other low carbon technologies (28%, compared to 16% overall).
- Graduates (22%, compared to 12% of non-graduates).
- Households with an income of £35,000 or more (22%, compared to 10% of lower income households).

The main barrier to getting an EV among non-owners was the purchase price (46%), followed by concerns about the range of an EV (33%) and a perceived lack of public charging points (25%). Other reasons included a preference for petrol or diesel cars (24%) and concerns about reliability (24%), high running costs (22%) and charging times (20%) (Figure 3.5).

Figure 3.5: Reasons why households would be unlikely to or have not yet got an electric or plug-in hybrid vehicle



Base: 827
ALL RESPONDENTS WHO ARE UNLIKELY TO GET A FULLY ELECTRIC OR PLUG-IN HYBRID VEHICLE OR WHO ARE LIKELY TO GET ONE IN THE NEXT TWO YEARS

Perceived accessibility to charging networks

To gauge perceptions around EVs further, non-EV owners were given two hypothetical statements on whether they thought they would be able to charge an EV at home or at off-peak times, and asked whether each statement was true or false for their household (see Figure 3.6).

Figure 3.6: Question asked to determine the level of savings necessary to shift use to off-peak times

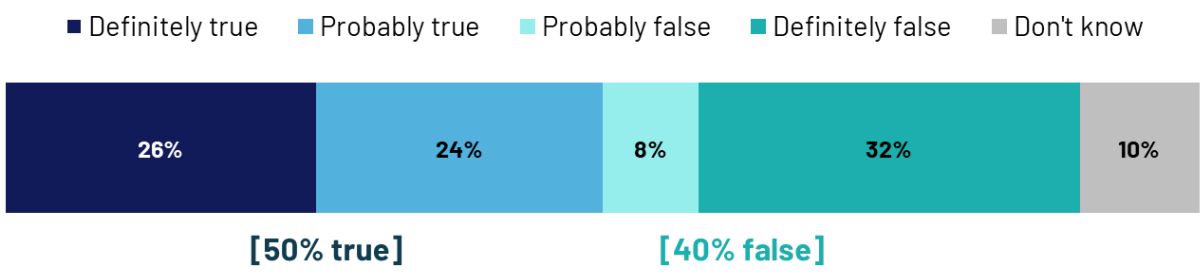
STATEMENT 1: If my household had a fully electric or a plug-in hybrid car or van, we would be able to charge it at home (such as in our garage or on our driveway).

STATEMENT 2: If my household had a fully electric or a plug-in hybrid car or van and a place to charge it, we would be able to charge the car at off peak times (10pm-8am or 11am-4pm).

Half of respondents (50%) said they could charge an EV at home if they owned one, while 40% said they could not (Figure 3.7).

Figure 3.7: Perceptions of ability to charge a fully electric or plug-in hybrid vehicle at home

Q: If my household had a fully electric or a plug-in hybrid car or van, we would be able to charge it at home (such as in our garage or on our driveway).

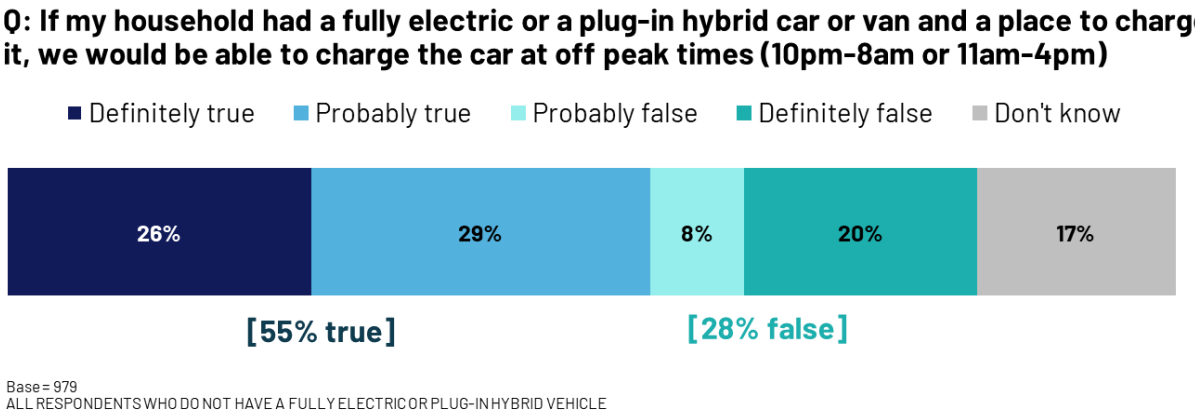


Base = 979
ALL RESPONDENTS WHO DO NOT HAVE A FULLY ELECTRIC OR PLUG-IN HYBRID VEHICLE

Those more likely to say this was true for their household included owner occupiers (59%, compared to 32%[10] of renters) and households with an annual income of £35,000 of more (59%, compared to 41% earning less than this).

In terms of their household's ability to charge an EV during off-peak times, just over half (55%) of non-owners said they would be able to do this if they owned an EV, although 17% said they did not know if they would be able to do this (Figure 3.8).

Figure 3.8: Perceptions of ability to charge a fully electric or plug-in hybrid vehicle at off-peak times



Base = 979
ALL RESPONDENTS WHO DO NOT HAVE A FULLY ELECTRIC OR PLUG-IN HYBRID VEHICLE

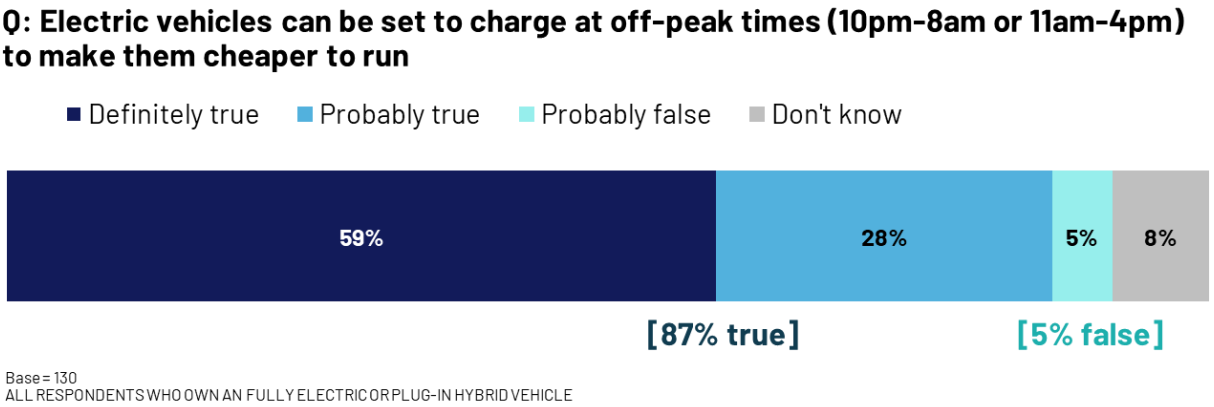
Again, owner occupiers and higher income households were more likely to say this was true for their household: 63% of owner-occupiers, compared to 38%[11] of renters; and 64% of households with an annual income of £35,000 of more (compared to 44% earning less than this).

Perceptions of EV owners on the ability to schedule charging during off-peak times

EV owners were asked a separate question about their perceptions around whether they thought EVs could be set to charge during off-peak times[12]. As shown in Figure 3.9, the majority of owners (87%) thought this was true.

[10] 30% of social renters and 35% of private renters.
[11] 34% of social renters and 43% of private renters.
[12] For example, through an app or smart charging feature.

Figure 3.9: Perceptions among EV owners on where an electric vehicle can be set to charge at off-peak times



Base = 130
ALL RESPONDENTS WHO OWN AN FULLY ELECTRIC OR PLUG-IN HYBRID VEHICLE

3.2.5 Storage heaters

Just 6% of all respondents said they used a storage heater. Among those who reported not having storage heaters, the primary reason was that they were not needed or wanted (28%). Additionally, one in five respondents (19%) believed that storage heaters were not cost-effective or worthwhile for their household.

3.2.6 Home battery storage for electricity

Only 5% of respondents said they used home battery storage for electricity which is higher than other estimates suggest[13] and suggests potential confusion between different types of batteries households may be using. Just over a quarter (27%) of solar panel owners and 17% of electric vehicle owners said they had this technology.

The most significant barrier for using home battery storage for electricity was a lack of knowledge, with 21% saying that they did not know enough about the technology. The cost of purchase or installation was also a concern, with 17% noting it as too high, and 18% indicating lack of need or desire for using the technology.

3.2.7 Heat pumps

Overall, 5% of respondents said their home had a heat pump. This is slightly higher than some other estimates focusing on Scotland suggest[14] and slightly higher than the reported take-up in

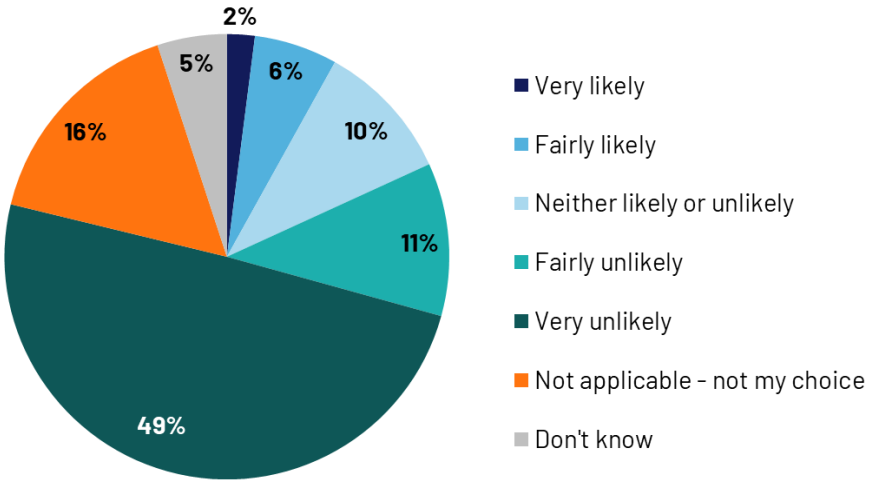
[13] MCS Data and Market Insights market data from May 2026 suggests that about 0.3% households would have had home battery storage for electricity installed in the UK https://greenseedpower.co.uk/blog/uk-battery-storage-installation-data-mcs-may-2026
[14] Uptake of net zero technologies in Scottish homes by Energy & Climate Intelligence Unit https://eciu.net/analysis/reports/uptake-of-net-zero-technologies-in-scottish-homes

Great Britain (3%) based on Ofgem's Flexibility and Net Zero survey.[15] Those living in rural areas were more likely than those in urban areas to have one (12%, compared to 2%).

Among those who did not own a heat pump, one in ten said their household was very or fairly likely to change their central heating system to a heat pump in the next two years. (Figure 3.10).

Figure 3.10: Likelihood to change central heating system to a heat pump in the next 2 years

Q: How likely or unlikely would your household be to change your central heating system to a heat pump in the next two years?



Base = 1,036
ALL RESPONDENTS WHO DO NOT HAVE A HEAT PUMP

Younger people (under 35) were far more likely to say their household would be likely to get a heat pump compared to older respondents (23% vs 5% respectively). Household income also influenced likelihood, with those in higher earning households also more likely to switch to a heat pump in the next two years - 14% of households earning over £55,000 said they were likely to switch compared to just 7% of those who earned less than this.

Among those who did not have a heat pump, the most common reasons for this were largely practical: as shown in Figure 3.11, 37% thought that the purchase price or running costs were prohibitively expensive, 29% indicated they would need to make home improvements prior to installation, and 27% cited the perceived hassle or disruption associated with installation. In addition, 20% thought that there was insufficient financial support available to aid in purchasing a heat pump.

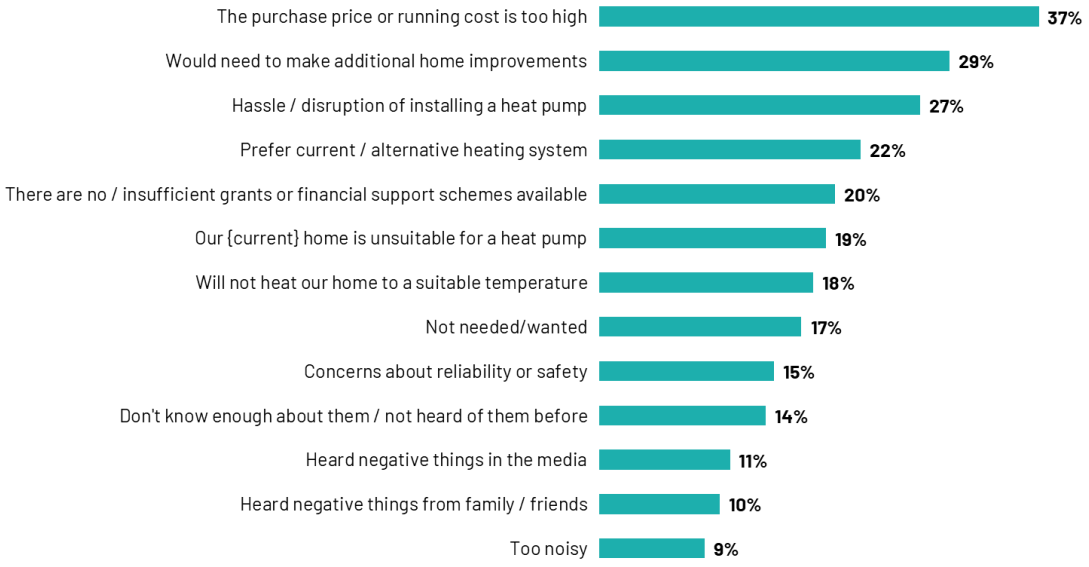
Other reasons included perceptions about the performance of heat pumps – 18% thought a heat pump would not adequately heat their home to a comfortable temperature and 16% had concerns

[15] Ofgem's Flexibility and Net Zero survey 2025 findings report p.17 https://www.ofgem.gov.uk/sites/default/files/2026-05/Flexibility-and-Net-Zero-Survey-Findings-Report-2025.pdf

about safety or reliability. Meanwhile, around one in ten had heard negative things about heat pumps in the media (11%) or from family or friends (10%), and 9% thought they would be too noisy.

Figure 3.11: Reasons why households would be unlikely to or have not yet got a heat pump

Q: For which, if any, of the below reasons [is your household unlikely to get / has your household not got] a heat pump [yet]?



Base=838
ALL RESPONDENTS WHO ARE UNLIKELY TO GET A HEAT PUMP OR WHO ARE LIKELY TO GET ONE IN THE NEXT TWO YEARS

Notably, older respondents, aged 55 and above, were more likely than younger respondents to cite almost all of the reasons above as potential barriers to getting a heat pump. These included:

- Purchase price or running costs too high (51%, compared to 24%).
- Too much hassle or disruption to install (36%, compared to 19%).
- Concerns it will not heat their home to a suitable temperature (26%, compared to 11%).
- Perceptions that their current property is unsuitable for a heat pump (23%, compared to 15%).
- Concerns about reliability or safety (17%, compared to 12%).
- Noise concerns (14%, compared to 5%).

3.3 Consumer typology groups

A classification framework was developed to better understand consumers' ability to engage with flexible energy use and benefit from Time of Use (ToU) tariffs. The framework was based on current ownership, acquisition, or stated intention to acquire low carbon technologies. These technologies included EVs, heat pumps, solar panels, battery storage, storage heaters, and smart heating controls.

Respondents were categorised into three groups according to their current and expected future access to these technologies[16].

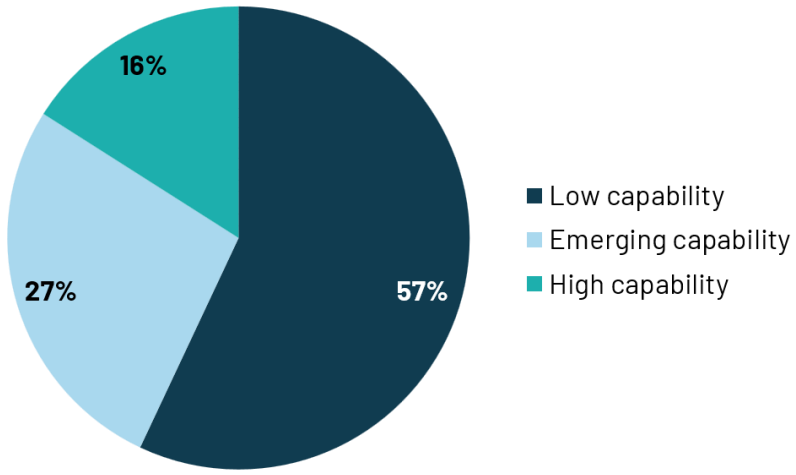
1. **High Capability**: Consumers in this group already have substantial access to low carbon technologies. They either own at least one technology and are in the process of acquiring two more / intend to acquire at least four more or own two or more technologies with no further intention. As a result, they are likely to have the greatest ability to shift electricity consumption and benefit from Time of Use tariffs.

2. **Emerging Capability**: Consumers in this group have limited current access to low carbon technologies but either currently own at most one technology or are in the process of acquiring / intend to acquire at least one of these technologies. Their ability to benefit from Time of Use tariffs is likely to increase over time.

3. **Low Capability**: Consumers in this group neither own nor intend to acquire any of the low carbon technologies. As a result, they may face greater constraints in shifting electricity consumption and accessing the benefits of Time of Use tariffs.

As shown in Figure 3.12, most respondents (57%) were classified as Low Capability consumers who neither own nor intend to acquire any of the low carbon technologies, while 27% were classified as Emerging Capability and 16% as High Capability.

Figure 3.12: Consumer typology classification



Base =757
ALL GAS/ELECTRIC USERS RESPONSIBLE FOR HOUSEHOLD BILLS WHO HAVE A SMART METER AND WHO KNOW IF THEY OWN A EV, HEAT PUMP, SOLAR PANELS, HOME BATTERY STORAGE, STORAGE HEATERS OR SMART HEATING CONTROLS AND / OR IF THEY INTEND TO PURCHASE ONE IN THE FUTURE

Differences in the profile of consumers were evident across the three groups.

[16] Further details on how respondents were classified is included in the Technical Report.

High Capability consumers were more likely to be:

- **Aged under 35** (26%, compared to 12% aged 35 and above)
- **Living in households with children** (24%, compared to 12% of households without children)
- **Men** (18%, compared to 12% of women)
- **Social housing renters** (24%, compared to 8% of those renting privately).

Emerging Capability consumers group were more likely to be:

- **Living in households with an income of £55,000 and above** (37%, compared to 23% of lower income households).
- **Aged 35 to 54** (37%, compared to 23% of younger and 24% of older respondents)
- **Living in households with children** (36%, compared to 24% without children)
- **Graduates** (32%, compared to 24% of non-graduates).
- **Working full- or part-time** (30%, compared to 23% of those not in work)
- **Owner occupiers** (30%, compared to 18% of renters[17]).

Meanwhile, **Low Capability consumers** were more likely to be:

- **Aged 55 and above** (65%, compared to 51% aged under 55)
- **Living in rented accommodation** (65%, compared to 54% of owner occupiers)
- **Living in households without children** (64%, compared to 39% of households with children)
- **Living in households with an income of less than £55,000** (63%, compared to 43% of higher income households)
- **Women** (61%, compared to 53% of men).

As might be expected, High Capability consumers were more likely than Low Capability to agree that they want to use low carbon products and services (76%, compared to 48%) and that they see their household as an early adopter of new technology (46%, compared to 18%).

[17] Among social renters, 63% were categorised as low capability consumers, 13% as emerging capability and 24% as high capability. Among private renters, 67% were categorised as low capability consumers, 25% as emerging capability and 8% as high capability.

These findings highlight that capability to engage with flexible energy use varies across different demographic and socioeconomic groups. In particular, High Capability consumers tend to be younger, male, and more likely to have children, while Low Capability consumers are more likely to be older, female, and living in lower-income households without children. Emerging Capability consumers are more likely to have higher incomes, be in employment, own their homes and be graduates.

4 Willingness and ability to flex household energy use

Overview of findings

This section explores the ability and willingness of Scottish consumers to shift their energy usage from peak to off-peak times, a change that can significantly lower energy costs and reduce carbon emissions. The survey focused on common household appliances such as washing machines, tumble dryers, and dishwashers, and identified opportunities for greater energy flexibility. Results indicate that:

- A majority of respondents are open to shifting their appliance usage to off-peak times if incentivised by potential savings. Notably, 16% said they would shift washing machine use for no financial incentive. However, 21% of washing machine users would not consider shifting even for a £200 annual saving. Practical barriers such as compatibility with household routines and noise concerns, along with concerns about safety, limit some households from changing their usage patterns.

- Most respondents (at least six in ten) said they were uncomfortable with the concept of smart technology automating their energy usage with regard to home heating and domestic appliance use, although EV owners were more receptive to automated charging. This reluctance highlights a potential need for increased public information on the benefits of off-peak energy use and smart technology solutions.

- While willingness to shift appliance use was generally high, practical constraints were a limiting factor. Households with children, younger consumers and those working full- or part-time were more likely to use appliances during peak periods, suggesting that these groups may have greater potential to shift energy use to off-peak times, but also face practical barriers to changing established routines.

4.1 Willingness and ability to flex household energy use

Peak energy times are when energy demand is at its highest. In the survey, **peak times were defined as between 8am and 11am or between 4pm and 10pm**, when people are getting up and ready for the day and when they are returning back home. **Off-peak times were defined as between 10pm and 8am or 11am and 4pm** when demand is lower.

The survey looked at respondents' current reported energy use behaviour and their potential to shift use to off-peak periods across three domestic appliances: washing machines / combined washer dryers, tumble dryers and dishwashers. These were chosen to represent current

opportunities for flexibility in commonly owned domestic appliances, that account for a significant portion of overall household electricity use[18].

Indeed, most surveyed households (88%) had access to a washing machine or combined washer/dryer at home, while around half (50%) had a dish washer, and 39% a standalone tumble dryer. Higher income households (with an annual income of £55,000 or more) and owner-occupiers were more likely than average to own any of these appliances (Table 4.1).

Table 4.1: Ownership of household appliances

	Average	Household annual income of £55,000+	Owner-occupiers	*Base: All users*
Washing machine	88%	92%	92%	*963*
Dishwasher	50%	69%	60%	*547*
Tumble dryer	39%	46%	45%	*428*

For each appliance respondents were asked:

- How often they used the appliance, during a typical week.
- What time(s) of day they usually used the appliance.
- If the respondent said they used the appliance during a peak hour period, they were asked what proportion of their peak time usage they would be willing and able to move to 'off-peak' times to make a specified cost saving.

The data from these questions allowed estimations to be calculated of the potential energy and cost savings of using a Time of Use tariff, based on respondents' self-reported frequency and time of appliance use, and the proportion of peak time usage they would be willing and able to move to off-peak times.

Washing machine users were also asked additional questions about the level of financial incentive required to shift usage to off-peak times. In addition, they were asked if their washing machine had a delay / timer function. Given constraints on survey length, these questions were not asked about the other appliances. Washing machines were chosen due to more widespread household ownership and use of this appliance in comparison to tumble dryers and dishwashers.

[18] 'Wet appliances', such as washing machines and dishwashers, account for nearly 10% of a household's energy bills - https://energysavingtrust.org.uk/how-save-energy-when-using-your-washing-machine/

4.2 Time of use of domestic appliances

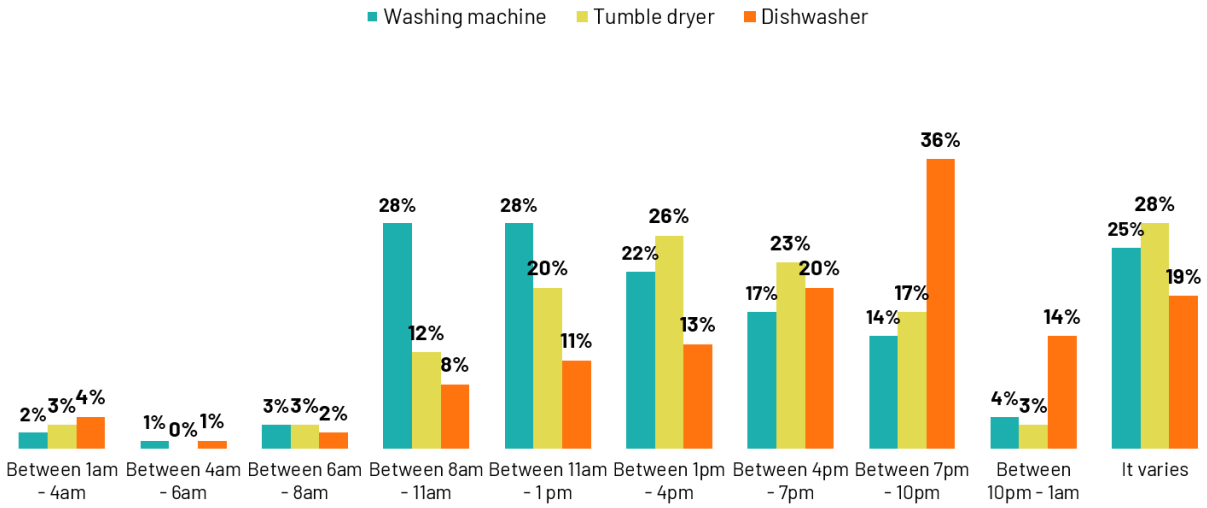
To determine whether usage typically takes place during peak or off-peak times, owners were asked what time of the day their household typically runs their washing machine[19], tumble dryer or dishwasher.

Overall, 53% of dishwasher users, 48% of washing machine users and 39% of tumble dryer users said they used their washing machine during peak hours (e.g. between 8am and 11am or between 4pm and 10pm).

The typical time of use of the different appliances varied. As shown in Figure 4.1, at least half of users said they ran their appliance during peak hours – 59% of washing machine users, 52% of tumble dryer users and 64% of dishwasher users. Users were more likely to run their washing machine during the peak hours between 8am and 11am, and dishwashers during peak hours between 7pm to 10pm – most likely after an evening meal.

Figure 4.1: Time of use of domestic appliances

Q: What time of day does your household usually run...?



Base = 963 (washing machines); 419 (tumble dryers); 547 (dishwasher)
ALL RESPONDENTS WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS, AND HAVE A WASHING MACHINE

As shown in Table 4.2, some groups were more likely than average to currently run their appliances during peak times. These groups included households with children; those under 55; respondents who were working full- or part-time; and in households with an income of £35,000 or more.

[19] The survey asked about washing machines or using the wash cycle on combined washer/dryers.

Table 4.2: Groups more likely to run appliances during peak hours

	Washing machine	Tumble dryer	Dishwasher
	% who run appliance during peak hours		
Average	48%	39%	53%
Households with children	58%	57%	62%
Aged under 55	56%	49%	59%
Working	56%	47%	59%
Household income of £35,000 or more	55%	48%	60%
Base: All users	*1,094*	*978*	*577*

Similar proportions of washing machine and tumble dryer users said they ran their appliance exclusively during peak hours – 30% of washing machine users and 25% tumble dryer users – while 42% of dishwasher users said they used their appliance exclusively during peak hours.

Respondents who were working full- or part-time were more likely than respondents who were not working to say they used their appliance exclusively during peak hours: 34% using a washing machine (compared to 25%), 30% using a tumble dryer (compared to 19%) and 48% using a dishwasher (compared to 31%).

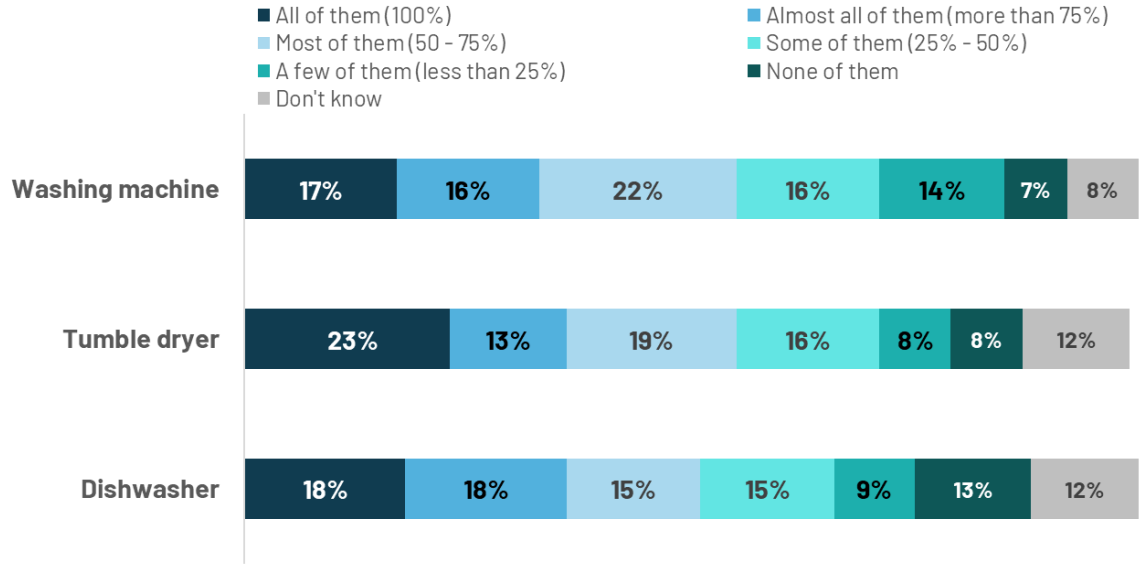
4.3 Willingness to shift energy use to off-peak

Peak time users of washing machines, tumble dryers and dishwashers were asked if they would be willing to move a proportion of their peak time appliance use to off-peak times if the price of energy was halved during off-peak hours.

The findings indicate that a majority of users would be willing and able to shift at least 25% of their appliance use to off-peak times – 71% of washing machine users, 72% of tumble dryer users and 66% of dishwasher users. Around a third of users said they would be willing to shift more than 75% of their appliance use to off-peak times (Figure 4.2).

Figure 4.2: Proportion of appliance usage willing to shift to off-peak times

Q. What proportion of your [washing machine / tumble dryer /dishwasher] loads that you currently do at peak times, if any, would your household be willing and able to move to 'off peak' times to make these savings?



Base: 685 (washing machine); 271 (tumble dryer); 386 (dishwasher)
ALL RESPONDENTS WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY, ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS, AND USE THE APPLIANCE DURING PEAK HOURS

The following groups were more likely to say they would be willing to shift more than 25% of their washing machine or dishwasher use to off-peak times[20]:

- **High Capability consumers** (81% would be willing to shift washing machine use, compared to 68% in the Low Capability groups; 79% would be willing to shift dishwasher use, compared to 61%).
- **Households with children** (80% would be willing to shift washing machine use, compared to 67% of households without children; 76% would be willing to shift dishwasher use, compared to 60%).
- Those **aged under 55** (76% would be willing to shift washing machine use, compared to 64% aged 55 and above; 73% would be willing to shift dishwasher use, compared to 55%).
- Respondents **working full- or part-time** (75% would be willing to shift washing machine use, compared to 64% not in work; 72% would be willing to shift dishwasher use, compared to 55%).

[20] The smaller sample base size limited the sub-group analysis that could be carried out among tumble dryer users.

4.4 Incentives required to encourage off-peak energy use

To explore the extent to which willingness to shift energy use was influenced by the level of financial incentive offered, washing machine users were asked a series of questions about their likelihood of changing their usage patterns in response to potential savings. The questions were asked in £50 increments, covering potential annual savings ranging from £0 to £200,

Figure 4.3: Question asked to determine the level of savings necessary to shift use to off-peak times

> "How likely, if at all, would your household be to move your washing machine/ combined washer-dryer use from peak to 'off peak' times if you could save [£0 / £50 / £100 / £150 / £200] per year on your energy bills?"

As shown in Figure 4.4, the level of incentive influenced users' willingness to shift their usage to off-peak times. Just under half (47%) of users said they definitely or probably would move their peak time washing machine use to off-peak times for a saving of £50 a year. This increased to 67% for an incentive of £100 and 79% for £200.However, these savings levels are substantially higher than the savings likely to be achievable through shifting washing machine use alone[21]. This suggests that financial incentives alone may not be sufficient to encourage all consumers to change their behaviour.

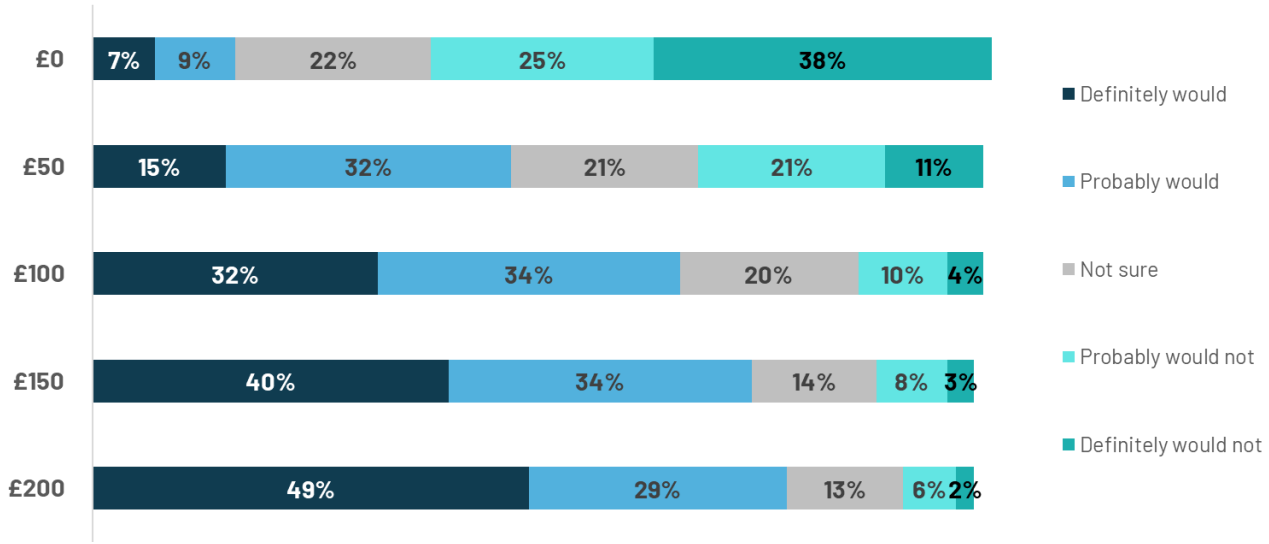
Notably, 16% of peak time users said they would be willing to move their washing machine use to 'off peak' times for no financial incentive. This highlights a potential opportunity to enhance public understanding of the benefits associated with off-peak energy usage, such as cost saving and environmental advantages, which could encourage even more users to shift peak energy use to off-peak times.

[21] Running a washing machine four times per week costs, on average, around £69 per year. The savings amounts presented in the questions (£50-200) were not intended to represent realistic savings from shifting washing machine use to off-peak hours, but were included to explore the level of financial incentive consumers would consider worthwhile in return for changing their behaviour.

https://www.citizensadvice.org.uk/scotland/consumer/energy/energy-supply/save-energy-at-home/check-how-much-your-electrical-appliances-cost-to-use/

Figure 4.4: Incentives required to encourage off-peak energy use

Q. How likely, if at all, would your household be to move your washing machine/ combined washer-dryer use from peak to 'off peak' times if you could save...



Base = 726
ALL RESPONDENTS WHO RUN WASHING MACHINE / COMBINED WASHER/DRYER AT PEAK TIMES

4.5 Barriers to shifting domestic appliance use to off-peak times

Users who said they could shift no more than 25% of their appliance usage to off-peak periods were asked what limited their ability to do so.

The reported barriers included both hard and soft barriers: those that would be difficult to change, such as technology limitations or lifestyle / work patterns; and those that were more attitudinal / knowledge barriers, such as lack of awareness or perceptions.

Among those washing machine, tumble dryer and dishwasher users who said they could shift no more than 25% of their appliance usage to off-peak periods[22], the main barriers to doing so were largely practical (Figure 4.5):

- Incompatibility with household routines and patterns (48% of washing machine users, 44% of tumble dryer users, and 47% of dishwasher users).
- Noise concerns (45% of washing machine users, 21% of tumble dryer users, and 25% of dishwasher users).
- (For washing machine users) not wanting to leave damp clothes in the machine (38%).

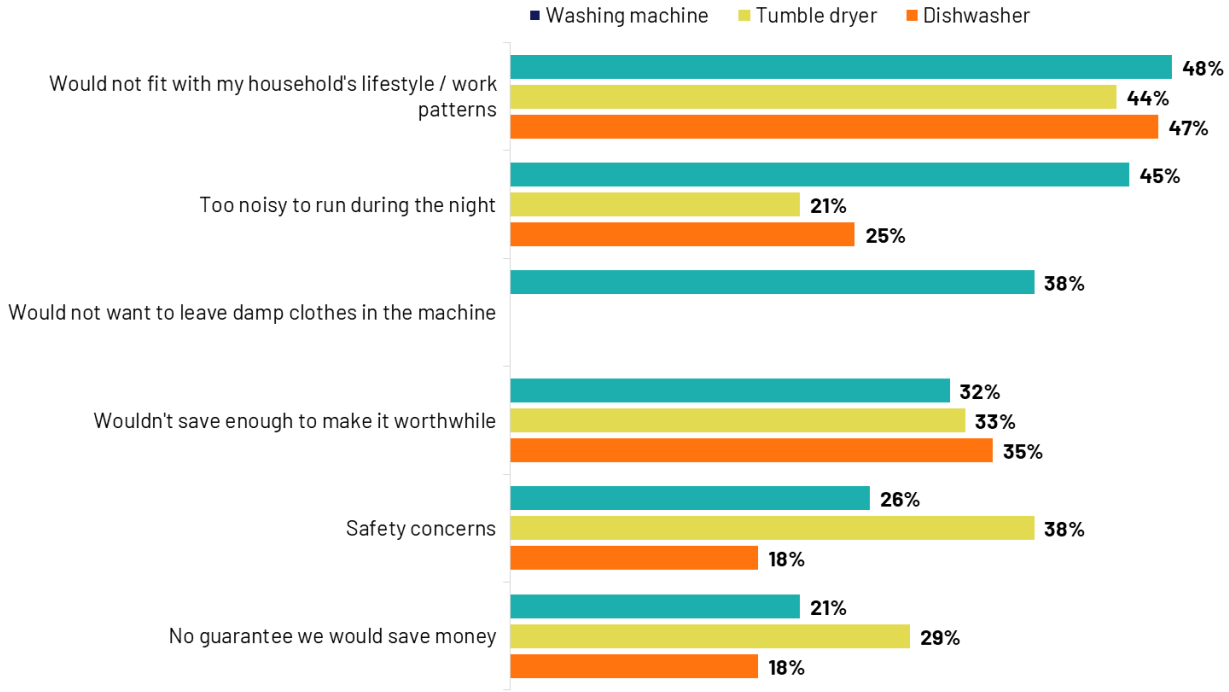
[22] 20% of all washing machine users, 10% of all tumble dryer users and 16% of all dishwasher users.

- Perceptions that the financial savings are insufficient to justify a change in routine (32% of washing machine users, 33% of tumble dryer users, and 35% of dishwasher users).

Safety concerns were also a key barrier to shifting, particularly among tumble dryer users – 38% reported this concern[23], compared to 26% of washing machine users and 18% of dishwasher users.

Figure 4.5: Barriers to shifting domestic appliance use to off-peak times

Q: Which, if any, of the following reasons limits your household's ability to switch some or all of your energy consumption for running your washing machine/wash cycles to 'off peak' times? (Top six barriers)



Base = 138 (washing machine); 43 (tumble dryer); 87 (dishwasher)
ALL RESPONDENTS WHO RUN [WASHING MACHINE / TUMBLE DRYER/ DISHWASHER] AT PEAK TIMES

4.6 Views on automation

Utilising data and digitalisation is widely seen as vital for reaching Scotland's climate goals, with automation playing an important role. Nevertheless, the survey results indicate that many consumers are not yet prepared for external management of their appliances and systems.

Respondents were presented with information about potential new smart technologies and services which would allow companies, such as energy suppliers, to remotely manage when household appliances run, within conditions set by the household. The information highlighted that this could help households to lower their energy costs and reduce carbon emissions by

[23] Perhaps reflecting recent news stories about safety warnings issued on around 85,000 integrated heat pump tumble dryers in the UK. See: https://www.gov.uk/government/news/urgent-safety-check-for-85000-tumble-dryers

shifting energy use to off-peak times. The question was preceded by an explanation of how this would work (Figure 4.6 below).

Figure 4.6: Question framing used for capturing respondents' views on a company managing household energy use

In the next few years, new smart technologies and services could help consumers to reduce energy bills and carbon emissions by shifting energy use to off-peak times.

With your agreement, some home appliances could be linked to a company like your energy supplier in the next few years. The company would remotely manage when these appliances run, within the conditions you set. Allowing them to do this automatically could lower your energy costs and help reduce carbon emissions by shifting your energy use to off-peak times.

For example, this could include:

- Heating: The supplier could manage heating times and/or adjust the thermostat by one or two degrees. For example, they could turn the customer's heating on when the cost of energy falls. The customer could still control it manually through their heating controls.
- Electric Vehicles: If a customer has an electric vehicle, the supplier could manage charging times to when energy is cheaper. The customer could still charge manually or set it to charge through their own timer or app.
- Appliances: Smart features on appliances like washing machines and dishwashers could automatically start a washing cycle when energy is cheaper.

This could reduce the customer's energy bills by helping them to use energy at times when it is cheaper, and could also reduce the carbon emissions produced by the UK energy system.

How comfortable, or uncomfortable, would you feel about a company managing each of the following on your household's behalf within the conditions you set?"

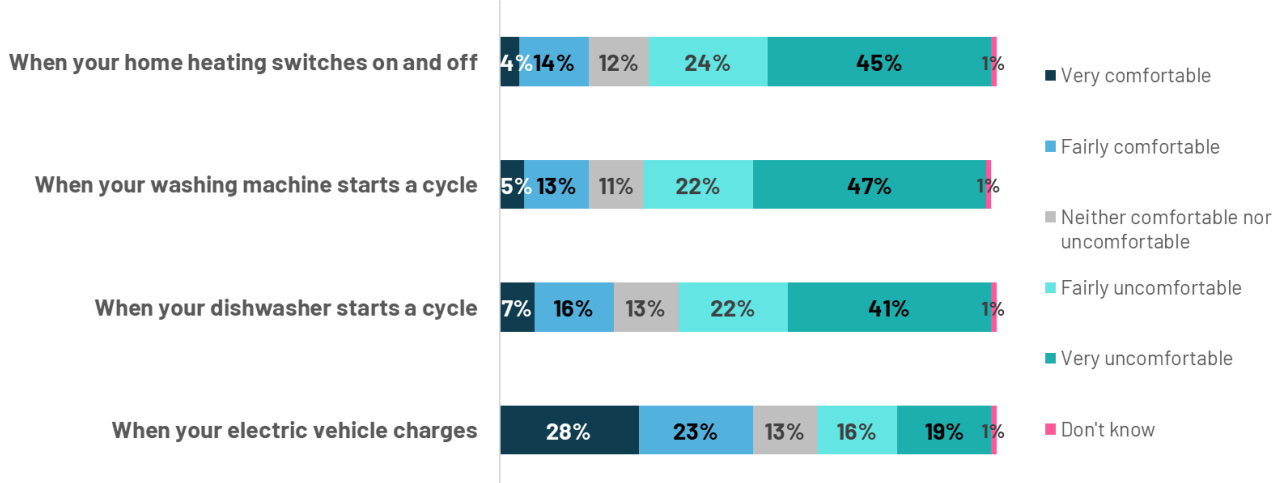
Respondents were then asked how comfortable they would feel about a company managing when their home heating switches on and off. Owners of washing machines, dishwashers and electric or plug-in hybrid vehicles were also asked if they would be comfortable with a company managing when their appliances start their cycles or their vehicle charges.

Overall, the majority expressed discomfort at the idea of a third party managing their household energy use. Around seven in ten said they would feel uncomfortable with a company managing when their washing machine starts a cycle (70%) or when their home heating switches on and off (68%), while 63% would be uncomfortable with a company managing when their dishwasher starts a cycle. At least four in ten indicated that they would be very uncomfortable with a company managing their household appliances. Specifically, 47% would be very uncomfortable with third-party control over washing machines, 45% with home heating and 41% with dishwashers (Figure 4.7).

Owners of electric or plug-in hybrid vehicles were more comfortable with this type of automation. Half (51%) said they would be comfortable with a company managing when their vehicle charges, while a third (36%) said they would be uncomfortable.

Figure 4.7: Views on a third party managing household energy use

Q. How comfortable, or uncomfortable, would you feel about a company managing each of the following on your household's behalf within the conditions you set?



Base: 1,094 (home heating); 978 (washing machine); 577 (dishwasher); 130 (electric vehicle);)
ALL RESPONDENTS WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY, ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS, AND WHO OWN TECHNOLOGY

These findings largely align with Ofgem's Flexibility and Net Zero survey covering Great Britain in 2025, which also showed low comfort levels across external management of home heating. Comfort was higher for EV charging than home heating, particularly among EV users. A majority of EV users (55%) said they would feel comfortable with a company managing when their vehicle charges.

As shown in Table 4.3, engagement with flexible and low carbon technologies and age are correlated with greater comfort towards automated energy use. Consumers in the High Capability group, those currently on or likely to change to a Time of Use tariff in future, and younger respondents (aged under 35) were more likely than average to say they were comfortable with a company managing their heating or household appliances.

In addition, households with children were also more likely to be comfortable with automation – which may in part reflect this group's openness to engaging with time or money saving services or technologies. Furthermore, given that households with children were also more likely than average to use their appliances during peak hours, there may be an opportunity for this group to shift their energy usage to off-peak times to a greater extent, should they engage with new smart technologies and services.

Table 4.3: Groups more likely to be comfortable with automation

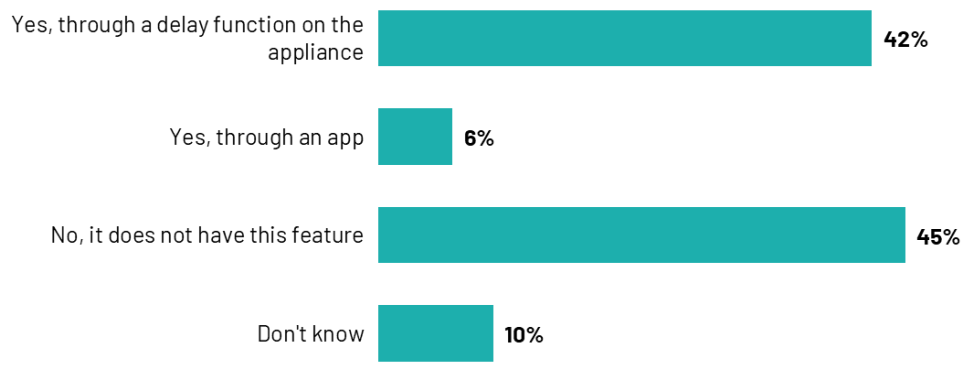
	Home heating	Washing machines	Dishwashers
	% very / fairly comfortable		
Average	19%	19%	24%
High Capability consumers	37%	36%	40%
Aged under 35	33%	27%	37%
Households with children	28%	29%	32%
Currently on / Likely to change to ToU tariff	32%	33%	39%
Base: All users	*1,094*	*978*	*577*

Current ability to delay washing cycles

To determine the current potential for washing machine users to automate or schedule their cycles to off-peak times, users were asked if their machine had a delay function. Almost half (46%) of users said their machine had this delay function, either on the appliance itself or through an app. However, 45% said their machine did not have this function, and 10% did not know if their appliance had this function (Figure 4.8).

Figure 4.8: Whether washing machine or combined washer/dryer has a delay function

Q: Does your household's washing machine or combined washer/dryer have a way to delay running it after loading (e.g. through an app or delay function)?



Base = 978 (Respondents could select more than one 'Yes' option)
ALL RESPONDENTS WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS, AND HAVE A WASHING MACHINE

Certain groups were more likely to say that their washing machine did not have a delay function:

- Those living in rented accommodation (61%[24], compared to 38% of owner-occupiers).
- Low-income households, earning less than £20,000 per annum (59%, compared to 41% of higher income households).
- Consumers aged 55 and above (53%, compared to 38% of those under 55)
- Those in the Low Capability group (50%, compared to 35% of High Capability consumers)
- Those who were not in work (51%, compared to 40% of those working full- or part-time).

Without a delay function on their machine, these groups therefore currently have less potential to use automation to flex their usage to off-peak hours.

[24] 69% of social renters and 50% of private renters.

5 Estimating flexibility potential and impact

Overview of findings

Analysis was carried out to estimate the potential benefits of using a Time of Use tariff and shifting energy usage, based on respondents' self-reported frequency and time of appliance use, and the proportion of peak time energy usage they would be willing and able to move to off-peak times. The analysis primarily focused on three appliances the survey asked about: washing machines, tumble driers and dishwashers.

- Based on current appliance use patterns, more than half (58%) of consumers would currently be financially better off on a Time of Use tariff. However, this rises substantially to 84% if consumers were to shift their appliance use to off-peak periods in line with their stated willingness to do so.
- Those aged 55 and above, households without children, lower-income households, those not in work and households using gas as their main heating source were more likely to benefit from a Time of Use tariff based on their current usage. However, once consumers' stated willingness to shift appliance use to off-peak times was taken into account, the differences between most groups were reduced and the potential benefits of Time of Use tariffs were more evenly distributed across the population.
- Financial benefits are broadly distributed across demographic groups, although High Capability consumers, with greater flexibility capacity, are among those who appear particularly well placed to benefit. Lower-income households could experience the largest gains relative to income but also face the largest proportional losses if a Time of Use tariff is not beneficial.
- Current and future ownership of technologies such as EVs and heat pumps further increases the proportion of consumers who would benefit from a Time of Use tariff.

5.1 Summary of analytical approach

Distributional analysis was conducted to examine the potential impacts of shifting appliance energy use to off-peak hours. Since details such as the make and model of appliances and the specific energy tariffs used by respondents were not known, appliance energy consumption and

costs of using each appliance were calculated based on the typical energy consumption per cycle of each appliance[25] and standard tariff pricing structures based on Ofgem and wider market data[26].

The survey also did not collect exact details about the frequency and time of appliance use. To address this, an approximate usage profile was constructed for each respondent, based on an average of the frequency of their appliance use proportionately allocated into the different time periods they reported using for each appliance (e.g. 8am to 11am, 11am to 1pm etc).

This allowed for estimations to be calculated on the proportion and type of consumers who may benefit from Time of Use tariffs, assuming no behaviour change.

By then combining this data with consumers' self-reported willingness to shift appliance use to off-peak hours, an estimation of the proportion who may benefit from a Time of Use tariff if they shifted their usage was calculated, along with the corresponding energy usage that could be shifted per appliance from peak to off-peak hours.

5.1.1 Limitations of the analysis

The findings from the analysis are based on a number of assumptions which have been made about respondents' self-reported energy use patterns, willingness to shift usage, and approximations of appliance(s) kWh energy usage. It is also important to recognise that these estimations only cover consumption related to the three appliances included in the survey (washing machines, tumble driers and dishwashers) and do not represent respondents' full household energy consumption.

As such, the findings should be treated as indicative rather than as definitive forecasts of energy and cost savings or behavioural changes. They are intended to provide a broad estimation of the potential scale of energy use that could be shifted from peak to off-peak hours and the proportion of consumers who could benefit as a result.

5.2 The most beneficial tariff based on current usage

Based solely on their reported use of washing machines, tumble dryers and dishwashers, a slightly higher proportion of consumers would currently be better off on a Time of Use tariff than they would be on a fixed-rate tariff. (i.e., not taking into account their willingness to shift usage to off-peak times). It should be noted this does not necessarily mean these households would have lower

[25] Typical appliance energy consumption values were obtained from Citizen Advice: https://www.citizensadvice.org.uk/scotland/consumer/energy/energy-supply/save-energy-at-home/check-how-much-your-electrical-appliances-cost-to-use/

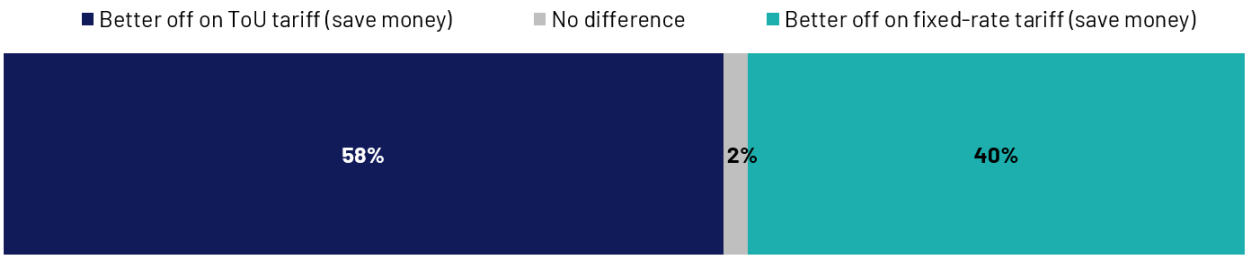
[26] A fixed tariff rate of £0.2467 per kWh and Time of Use tariff rates of £0.1467 per kWh (off-peak) and £0.3467 (peak) per kWh were used for the purpose of the analysis. These rates were based on Ofgem price cap data and indicative market tariffs. See: https://www.ofgem.gov.uk/news/changes-energy-price-cap-between-1-april-and-30-june-2026; https://www.powervault.co.uk/blog/time-of-use-tariffs-a-guide-to-saving-on-energy-bills-in-the-uk/

overall electricity bills on a Time of Use tariff, since the analysis does not account for use of heating, cooking, lighting, electric vehicles or other electrical appliances.

Although Figure 4.1 shows that many consumers use at least one of the three appliances during peak periods, respondents could report using an appliance at both peak and off-peak times. The result therefore reflects the estimated balance of appliance cycles across all the time periods reported, rather than simply whether a household uses an appliance during peak hours at all. Consequently, households whose estimated use of these appliances falls predominantly during off-peak periods are modelled as better off on the Time of Use tariff, even if they also report some peak-time use.

Almost six in ten (58%) would be better off on a Time of Use tariff, while four in ten (40%) would be better off on a fixed-rate tariff (Figure 5.1).

Figure 5.1: Proportion of respondents currently better off on a Time of Use or fixed-rate tariff



Base = 855
ALL RESPONDENTS WHO OWN A WASHING MACHINE, TUMBLE DRYER AND/OR DISHWASHER AND WHO SPECIFIED THEIR TYPICAL TIME AND FREQUENCY OF USE OF THESE APPLIANCES AND WHICH TYPE OF TARIFF TYPE THEY ARE CURRENTLY ON

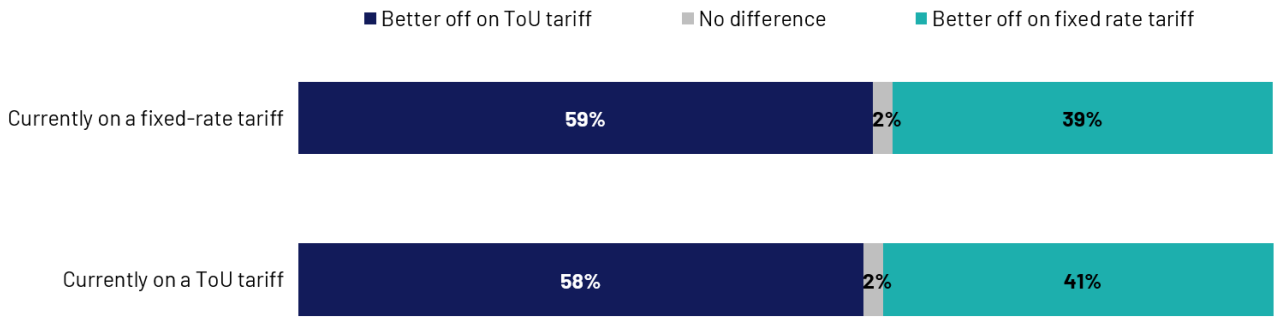
Based on their current appliance usage, the following groups of consumers were more likely to benefit from a Time of Use tariff, broadly reflecting those less likely to use their appliances during peak hours (see Section 4.2):

- Respondents who were not working (67%, compared to 52% working full- or part-time)
- Respondents aged 55 and above (65%, compared to 53% of younger respondents)
- Households with an income of less than £35,000 per year (65%, compared to 51% of higher income households)
- Households without children (61%, compared to 50% with children)
- Households using gas as its main heating source (59%, compared to 48% using electric).

Further analysis was conducted to determine if respondents were currently on the most suitable tariff for their household (either a fixed rate or Time of Use tariff), based on current frequency and time of appliance use. Among respondents who said that they are currently on a fixed rate tariff, around four in ten (38%) were on the most suitable tariff for their household, while more (59%) would be better off on a Time of Use tariff. Meanwhile, among respondents who said that they were currently on a Time of Use tariff, the findings indicated that while 58% were on the most

suitable tariff, 41% may be better off if they moved to a fixed rate tariff (Figure 5.2). Consumers may therefore benefit from more support and advice on the most suitable tariff for their household and how to use household appliances optimally if on a Time of Use tariff.

Figure 5.2: Proportion of respondents currently better off on a Time of Use or fixed-rate tariff, by current tariff

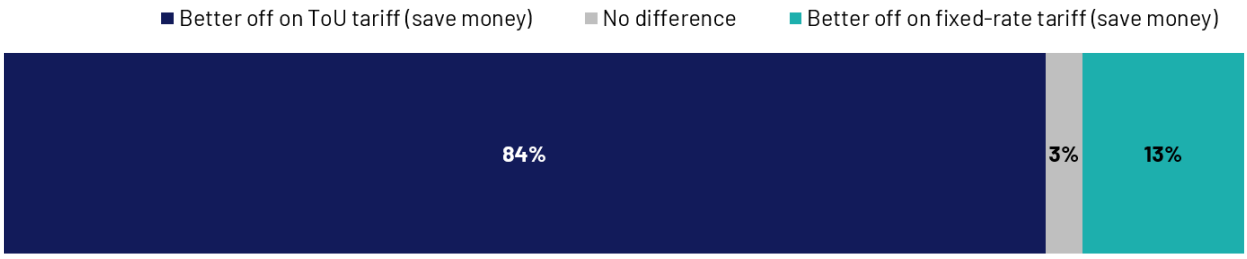


Base: = 472 (fixed rate tariff); 383 (time of use tariff)
ALL RESPONDENTS WHO OWN A WASHING MACHINE, TUMBLE DRYER AND/OR DISHWASHER AND WHO SPECIFIED THEIR TYPICAL TIME AND FREQUENCY OF USE OF THESE APPLIANCES AND WHICH TYPE OF TARIFF TYPE THEY ARE CURRENTLY ON

5.3 Impacts of shifting energy use to off-peak hours

If consumers were to shift their appliance use to off-peak times in line with their stated level of willingness to do so, the potential benefits of being on a Time of Use tariff would be greater. As shown in Figure 5.3, a majority of consumers (84%) would benefit from a Time of Use tariff if they shifted appliance usage to off-peak hours (compared to 58% currently better off on a Time of Use tariff), while 13% would be worse off.

Figure 5.3: Proportion of respondents better off on a Time of Use or fixed rate tariff based on willingness to shift



Base = 855
ALL RESPONDENTS WHO OWN A WASHING MACHINE, TUMBLE DRYER AND/OR DISHWASHER AND WHO SPECIFIED THEIR TYPICAL TIME AND FREQUENCY OF USE OF THESE APPLIANCES AND WHICH TYPE OF TARIFF TYPE THEY ARE CURRENTLY ON

Among those who would be worse off on a Time of Use tariff, an additional average of 131kWh of annual appliance electricity use would need to be shifted from peak to off-peak periods to benefit from this tariff. This is in addition to any appliance use that respondents had already stated they would be willing and able to shift. This would be equivalent to approximately 23% of this group's overall annual appliance use. In practical terms, this would be equivalent to shifting approximately 2 washing machine or dishwasher cycles per week, or 1 tumble drying cycle every 2 weeks.

Table 5.1 below shows the proportions of consumers across different groups who would be better off on a Time of Use tariff, or better off on a fixed rate tariff, if they shifted their appliance use to off-peak times.

Table 5.1: Proportion of respondents better off on a Time of Use or fixed rate tariff based on willingness to shift by group

	Better off on a ToU tariff	Better off on a fixed rate tariff	No difference	*Base*
Overall				
All respondents	83%	13%	3%	*855*
Household income				
Up to £19,999	87%	7%	6%	*113*
£20,000 to £34,999	85%	13%	2%	*202*
£35,000 to £54,999	80%	18%	2%	*222*
£55,000+	85%	12%	3%	*256*
Typology group				
High capability	87%	9%	4%	*100*
Emerging capability	85%	12%	2%	*160*
Low capability	83%	14%	3%	*263*
Age				
16 – 34	83%	13%	3%	*196*
35 – 54	82%	15%	3%	*278*
55+	86%	11%	3%	*381*
Tenure				
Owner occupier	87%	13%	2%	*622*
Renter	81%	14%	5%	*226*
- Social rented	83%	10%	7%	*99*
- Private rented	79%	17%	4%	*127*
Main household heating type				
Gas	84%	14%	3%	*589*
Electric	87%	10%	3%	*136*

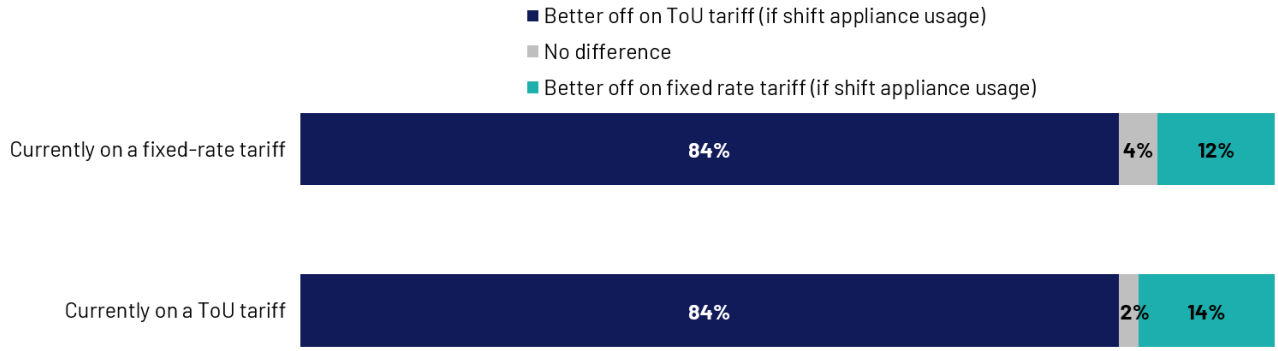
Heat pump	83%	9%	8%	*34*
Working status				
Working	83%	14%	3%	*531*
Not in work	86%	11%	3%	*324*
Children in household				
Children	81%	14%	4%	*608*
No children	85%	12%	3%	*247*
Rurality				
Urban	83%	14%	3%	*636*
Rural	87%	12%	1%	*180*
Area deprivation				
1 (most deprived)	82%	11%	7%	*113*
2	81%	16%	2%	*160*
3	83%	15%	2%	*172*
4	86%	13%	2%	*188*
5 (least deprived)	86%	11%	3%	*182*

There was little statistically significant variation across the demographic groups examined, indicating that the benefits of switching to a Time of Use tariff are broadly distributed across the population. One exception was tenure. Owner occupiers were slightly more likely than those renting their property to benefit from a time of use tariff - 87%, compared to 81% of those living in rented accommodation (and 79% of private renters).

Looking specifically at those currently on a fixed rate tariff, 84% of this group would benefit from a change to a Time of Use tariff if they shifted their appliance use to off-peak. Meanwhile, 12% would be better off staying on a fixed rate tariff even if they shifted a proportion of their appliance use to off-peak.

Among those currently on a Time of Use tariff, 84% would be better off staying on this tariff if they shifted energy use to off-peak hours, while 14% would be worse off (Figure 5.4).

Figure 5.4: Proportion of respondents better off on a Time of Use or fixed-rate tariff based on willingness to shift, by current tariff



Base: = 472 (fixed rate tariff); 383 (time of use tariff)
ALL RESPONDENTS WHO OWN A WASHING MACHINE, TUMBLE DRYER AND/OR DISHWASHER AND WHO SPECIFIED THEIR TYPICAL TIME AND FREQUENCY OF USE OF THESE APPLIANCES AND WHICH TYPE OF TARIFF TYPE THEY ARE CURRENTLY ON

Among consumers currently on a Time of Use tariff, some groups were more likely to be better off on a fixed-rate tariff than others, even after shifting a proportion of their appliance use to off-peak periods. These were largely those groups that reported a higher share of appliance use during peak hours (see Section 4.2), including:

- those **working full- or part-time** (19% would be better off on a fixed-rate tariff, compared to 4% not in work);
- those **living in households with children** (19% would be better off on a fixed-rate tariff, compared to 11% of those without children)
- those with a **household income of more than £35k per annum** (18% would be better off on a fixed-rate tariff, compared to 10% earning less than this)
- those **aged under 55** (16% would be better off on a fixed-rate tariff, compared to 7% aged 55 and above)
- those **living in urban areas** (16% would be better off on a fixed-rate tariff, compared to 7% in rural areas).

The greater likelihood of these groups being better off on a fixed-rate tariff is consistent with their higher levels of peak-time appliance use. This suggests they may face greater constraints on their ability to shift electricity consumption to off-peak periods and have less scope to benefit from a Time of Use tariff.

5.4 Financial Impact of a Time of Use tariff after shifting appliance use to off-peak hours

This section estimates the combined financial impact of being on a Time of Use tariff, assuming households shifted appliance use to off-peak periods in line with their stated willingness to do so. It compares the estimated cost of using the three appliances on a Time of Use tariff after this shift with the cost of the same total appliance consumption on a fixed-rate tariff.

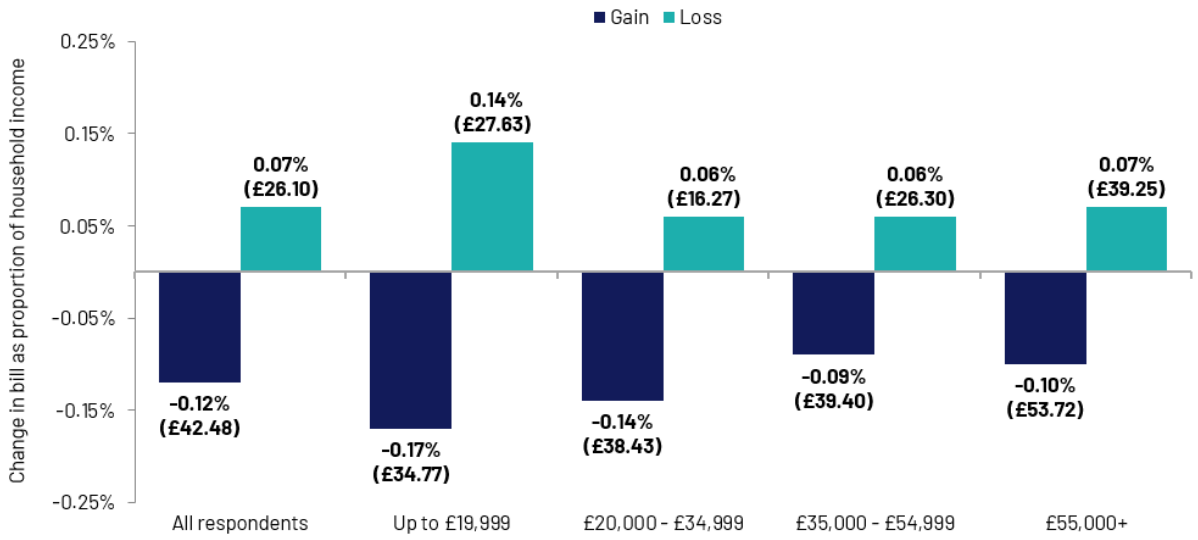
The estimates therefore capture two related effects: the effect of moving from a fixed-rate tariff to a Time of Use tariff, and the effect of shifting their time of appliance usage. They should not be interpreted as the financial effect of shifting appliance use alone - a household's estimated gain or loss will depend both on its initial pattern of peak and off-peak use and on how much peak-time use it will shift to off-peak hours.

The analysis assumed that the frequency of a household's appliance use would remain unchanged. The only change made was to when these appliances were used, based on the proportion of usage respondents said they would be willing and able to move to off-peak times. The analysis did not include other sources of electricity use, such as heating, cooking, lighting or other appliances, so it does not estimate the impact on households' total electricity bills.

Overall, households that would benefit from a Time of Use tariff would save around 0.12% of their annual household income on their energy bills (on average, equivalent to around £42.48), compared with if they were on a fixed-rate tariff. In contrast, households that would not benefit would be worse off by around 0.07% of their household income on a Time of Use tariff than on a fixed-rate tariff (on average, bills would increase by £26.10) (Figure 5.5). Considering that just under half (47%) of users said they definitely or probably would move their peak time washing machine use to off-peak times for a saving of £50 a year (Section 4.4), the estimated average saving of £42.48 is broadly comparable to the level of incentive that many consumers reported would encourage them to change their behaviour.

In terms of household income, the potential financial benefits of Time of Use tariffs are proportionally greater for lower-income households: these households stand to achieve the largest savings relative to income from shifting electricity use to off-peak periods - a 0.17% saving (£34.77), compared to 0.12% for all households. However, they also face the largest proportional losses if they are unable to shift demand - 0.14% (£27.63), compared to 0.07% overall.

Figure 5.5: Financial impact of shifting energy use to off-peak hours and being on a ToU tariff (as a proportion of household income) – overall and by income

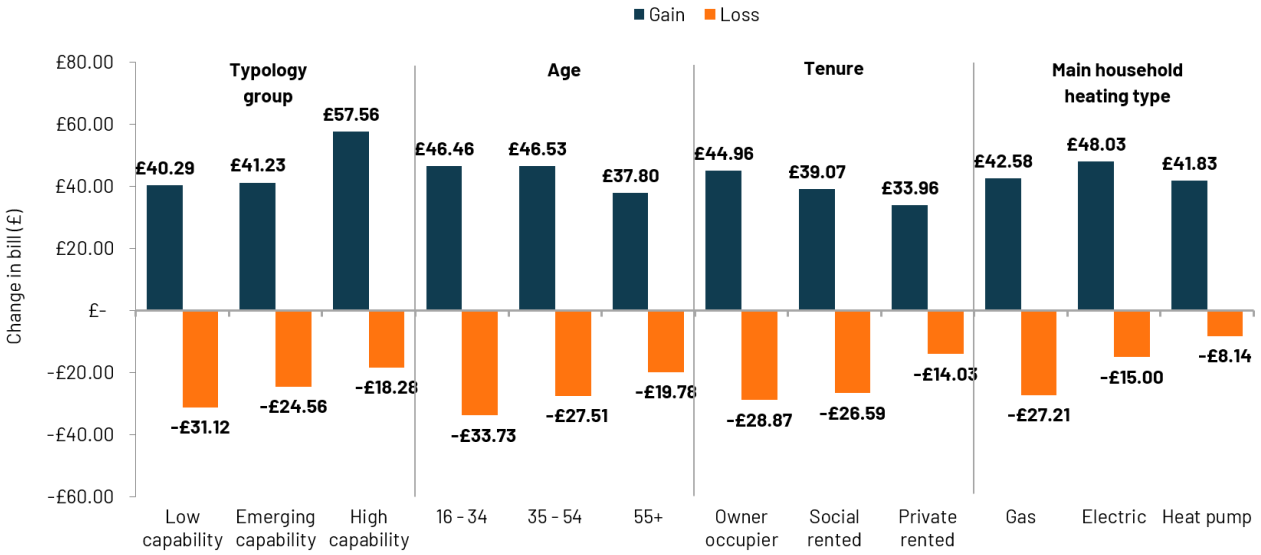


Base: = 793
ALL RESPONDENTS WHO OWN A WASHING MACHINE, TUMBLE DRYER AND/OR DISHWASHER AND WHO SPECIFIED THEIR TYPICAL TIME AND FREQUENCY OF USE OF THESE APPLIANCES, WHICH TYPE OF TARIFF TYPE THEY ARE CURRENTLY ON AND THEIR INCOME

The average financial gains and losses (in £) among other groups are shown in Figures 5.6 and 5.7. Based on the typology classification (discussed in section 3.3), the High Capability consumer group appear best placed to benefit from a Time of Use tariff, combining the largest potential average savings (£57.56) with relatively small losses (£18.28).

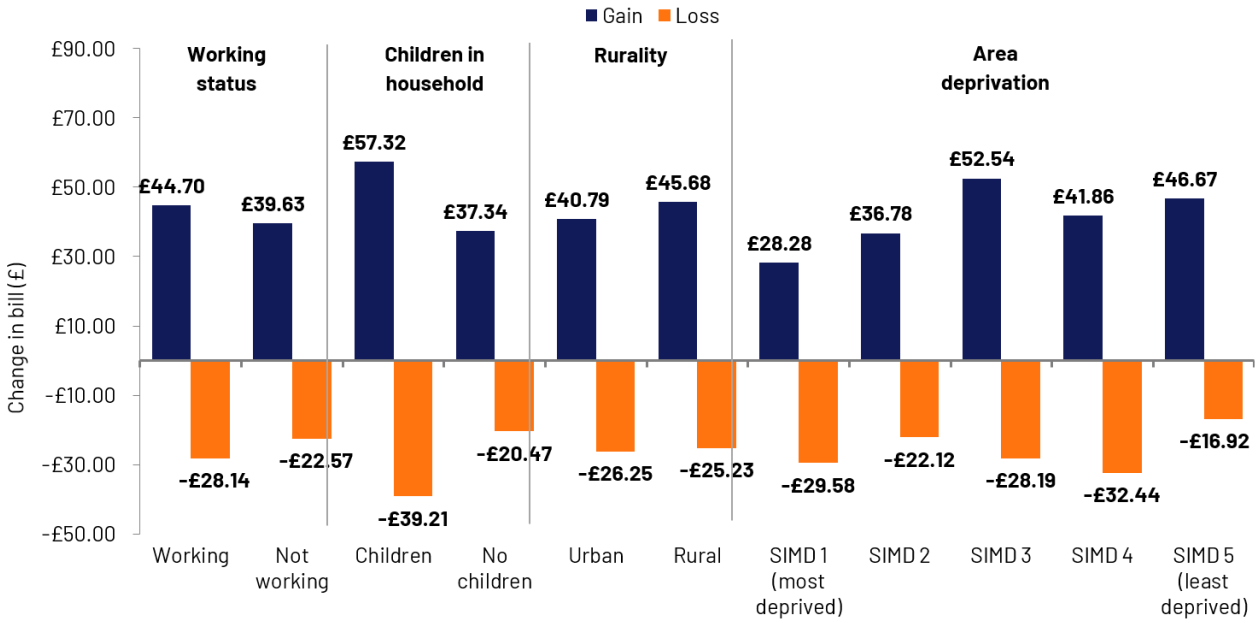
The other groups that would stand to benefit the most from a Time of Use Tariff, include respondents aged under 55, social renters and those with children in the household (all could make savings of between £46 and £58). However, they also face relatively large losses where the tariff was not beneficial. This indicates a higher degree of both opportunity and risk for these groups compared with some other consumers.

Figure 5.6: Financial impact (in £) of shifting energy use to off-peak hours and being on a ToU tariff- by typology group, age, tenure and heating type



Base: Typology group = 523; Age = 855; Tenure = 848; Heating type = 759
ALL RESPONDENTS WHO OWN A WASHING MACHINE, TUMBLE DRYER AND/OR DISHWASHER AND WHO SPECIFIED THEIR TYPICAL TIME AND FREQUENCY OF USE OF THESE APPLIANCES, WHICH TYPE OF TARIFF TYPE THEY ARE CURRENTLY ON AND WHO WERE ALLOCATED TO A DEMOGRAPHIC SUBGROUP

Figure 5.7: Financial impact (in £) of shifting energy use to off-peak hours and being on a ToU tariff – by working status, children in household, rurality and area deprivation



Base: Working status = 855; Children in household = 855; Rurality = 816; Area deprivation = 815
ALL RESPONDENTS WHO OWN A WASHING MACHINE, TUMBLE DRYER AND/OR DISHWASHER AND WHO SPECIFIED THEIR TYPICAL TIME AND FREQUENCY OF USE OF THESE APPLIANCES, WHICH TYPE OF TARIFF TYPE THEY ARE CURRENTLY ON AND WHO WERE ALLOCATED TO A DEMOGRAPHIC SUBGROUP

5.5 Flexibility potential: estimated annual energy use which could be shifted from peak to off-peak times based on willingness to shift

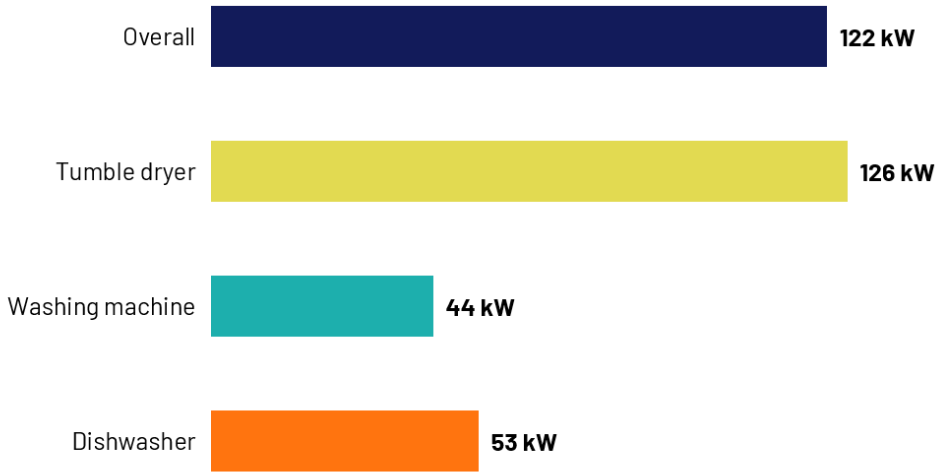
The flexibility potential in terms of the amount of annual energy that could be shifted from peak to off-peak times is shown in Figure 5.8 below.

Based on their appliance usage and self-reported willingness to shift, on average, respondents' households could shift approximately 122kWh of annual energy usage from peak to off-peak hours.

By extending this to the wider Scottish population[27], this could amount to an estimated overall annual shift of 305 GWh from peak to off-peak hours.

Of the three appliances, the greatest flexibility potential comes from shifting tumble dryer use to off peak hours – an estimated 126kWh of tumble dryer use per household could be shifted to off-peak hours (around 26 cycles), compared to 53kWh for dishwashers (around 55 cycles) and 44kWh for washing machines (around 35 cycles per year) (Figure 5.8).

Figure 5.8: Estimated annual energy use which could be shifted from peak to off-peak times based on willingness to shift



Base: All household using at least one appliance = 855; Washing machine users = 801; Tumble dryer users = 349; Dishwasher users = 478
ALL RESPONDENTS WHO OWN A WASHING MACHINE, TUMBLE DRYER AND/OR DISHWASHER AND WHO SPECIFIED THEIR TYPICAL TIME AND FREQUENCY OF USE OF THESE APPLIANCES AND WHICH TYPE OF TARIFF TYPE THEY ARE CURRENTLY ON

5.6 Impact of current and future electric vehicle and heat pump ownership

To understand how other technologies might change the financial outcomes of moving to a Time of Use tariff, analysis was conducted focusing specifically on EVs and heat pumps. This aimed to determine whether owning, or intending to own, an EV or heat pump would unlock sufficient off-peak savings to move households into the "better off" on a Time of Use tariff category.

To do so, the analysis integrated estimates from Ofgem's Flexibility and Net Zero survey (2025)[28] on how EV and heat pump owners typically use these technologies and the associated electricity costs. It is important to note that these assumptions are based on the average UK consumer, rather than solely Scottish users. In practice, a range of household factors are likely to influence actual usage patterns and a household's willingness or ability to shift demand.

[27] In 2024 the number of households in Scotland was 2.55 million. See: https://www.nrscotland.gov.uk/publications/households-and-dwellings-in-scotland-2024/

[28] Ofgem Flexibility and Net Zero (FANZ) Survey report (2025) https://www.ofgem.gov.uk/sites/default/files/2026-05/Flexibility-and-Net-Zero-Survey-Findings-Report-2025.pdf

The assumptions derived from the Ofgem survey were incorporated into the analysis to estimate how current or future ownership of an EV or heat pump could affect households' financial outcomes under a Time of Use tariff. This enabled an estimation of whether the additional flexibility and off-peak electricity use associated with these technologies would increase the likelihood of households being financially better off on a Time of Use tariff compared to being on a fixed-rate tariff. The assumptions taken from the Ofgem survey are summarised below:

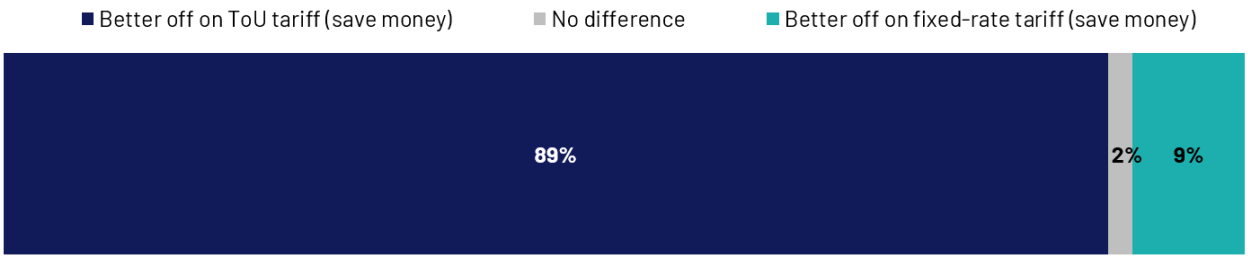
- **EVs**: a conservative annual EV charging demand of 1,478 kWh was used. This assumes 48 charging sessions per year based on responses to the Ofgem FANZ survey, treating the survey's open-ended category of "four or more times per month" as exactly four sessions per month. The estimate should therefore be interpreted as a conservative survey-derived estimate, as households in the open-ended category may charge more frequently than four times per month. Based on data from the Ofgem survey, the majority of EV owners (85%) charge their vehicles overnight, during off-peak hours. For the remaining peak usage, an average willingness-to-shift factor was applied, moving 73% of that peak consumption into off-peak hours (see technical report for the assumptions underpinning these figures).
- **Heat pumps:** It was assumed that, on average, heat pumps consume 2,551 kWh annually[29]. Time of usage was assumed to be split fairly evenly between peak (49%) and off-peak hours (51%). An average willingness-to-shift factor was then applied, moving 40% of peak heating demand into off-peak periods.

For all respondents who reported they currently own or have an intention to adopt one or both of these technologies, their projected annual energy bills were calculated under both fixed and Time of Use tariff scenarios. The revised Time of Use bill was compared against the revised fixed tariff bill. This enabled the estimation of the new distribution of households who would be better off on a Time of Use tariff when incorporating EV and heat pump technology ownership (or intention to own) and stated willingness to shift behaviours.

It is estimated that after incorporating EV and heat pump technology ownership, around nine in ten consumers (89%) would benefit from a Time of Use tariff if they shifted appliance usage to off-peak hours, compared to 84% before taking into account ownership of these technologies (Figure 4.5).

[29] Centre for Net Zero, 2026, Decarbonizing Heat: The Impact of Heat Pumps and a Time-of-Use Heat Pump Tariff on Energy Demand. Available at: https://cdn.sanity.io/files/lrxd4jqj/production/d6cf36ec5b8bf52f9aa8571f4a1694ba090d0b3c.pdf

Figure 4.5: Proportion of respondents better off on a Time of Use or fixed rate tariff based on willingness to shift and current / future ownership of EVs and / or heat pumps



Base = 855
ALL RESPONDENTS WHO OWN A WASHING MACHINE, TUMBLE DRYER AND/OR DISHWASHER AND WHO SPECIFIED THEIR TYPICAL TIME AND FREQUENCY OF USE OF THESE APPLIANCES AND WHICH TYPE OF TARIFF TYPE THEY ARE CURRENTLY ON

Notably, none of those better off on a fixed rate tariff were currently owners of either an EV or a heat pump, highlighting that, on average, ownership of these technologies may increase the likelihood that a household would benefit from a Time of Use rather than a fixed-rate tariff. However, given these calculations rely on average assumptions, these findings should be treated as illustrative estimates and interpreted with caution, as individual financial outcomes will vary based on specific household characteristics and behaviours.

6 Energy saving events

Overview of findings

This section explores Scottish consumers' engagement with energy saving events aimed at shifting energy use from peak to off-peak times.

- Around six in ten respondents said that, before taking part in the survey, they knew at least a little about energy saving events, and around a quarter had participated in one during the last 12 months. Most participants said they had altered their energy use patterns during the offer, such as changing how often they used home heating or household appliances.
- Among those who have yet to participate, primary barriers include perceptions of limited availability from energy suppliers, lack of knowledge about the events, and uncertainty about the financial benefits.

6.1 Energy saving events

Energy suppliers and services currently provide a number of energy saving offers aimed at incentivising a shift in energy use from peak to off-peak times[30]. These offers typically involve suppliers notifying their customers of specific times when they can change how or when they use energy in return for a reward (such as credit against their energy bill, points within a scheme or prizes). For example, suppliers may notify customers of times when energy demand is high and encourage them to reduce their energy use for this period.

To better understand engagement with these events among Scottish consumers, respondents were asked a series of questions about their awareness of and participation in energy saving events.

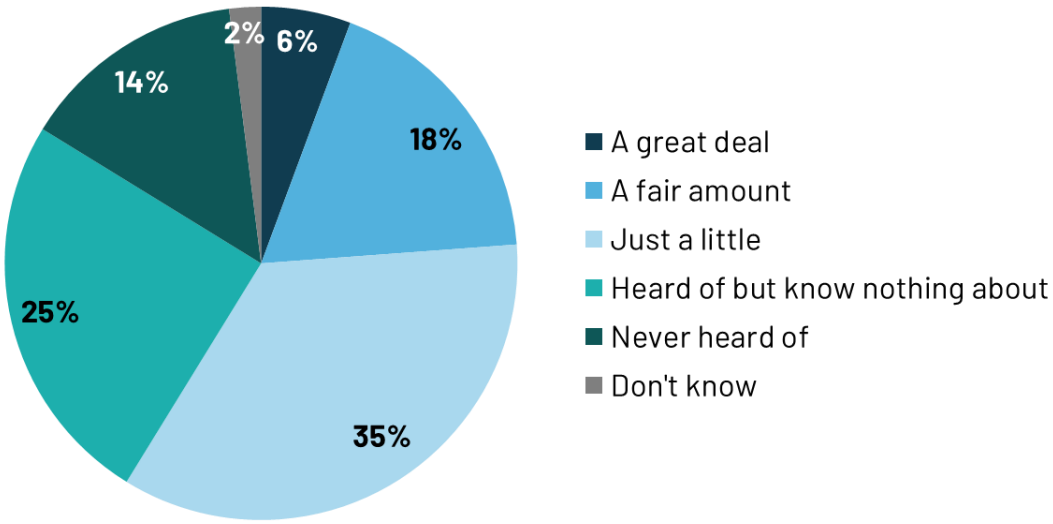
6.2 Awareness of energy saving events

Overall, around six in ten (59%) respondents said that, before taking part in the survey, they knew at least a little about these events, with a quarter (24%) saying they knew a great deal or a fair amount (Figure 6.1).

[30] For example: British Gas' 'Peak Save', Octopus Energy's 'Saving Sessions', Scottish Power's 'Power Saver' and Uswitch's 'Power Hours' offers.

Figure 6.1: Awareness of energy saving events

Q: Before today, how much did you know about these energy saving offers?



Base=1094
ALL RESPONDENTS WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS

High and Emerging Capability groups were more likely than those in the Low Capability group to know at least a little about energy saving events (82% and 68% respectively, compared to 55%).

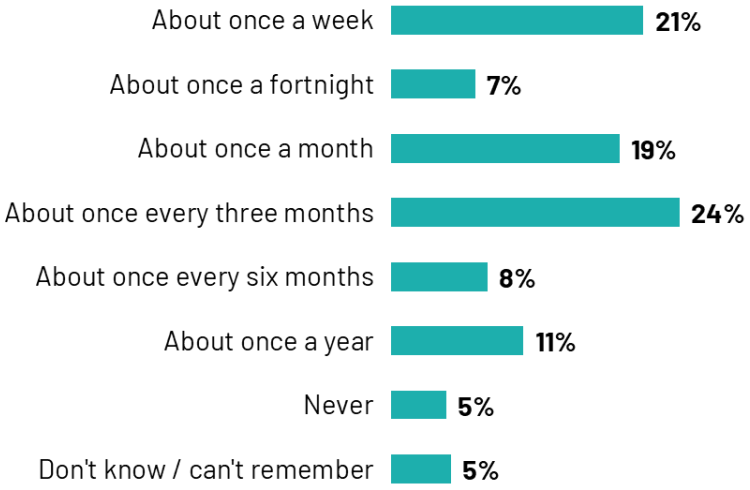
6.3 Participation in energy saving events

Among those who knew at least a little about energy saving events, less than half (44%)[31] said they had participated in one before. High Capability consumers and owner-occupiers were more likely than average to have participated in an event (61 and 47% respectively, compared to 44% overall).

A majority (90%) of those who had taken part in an event had taken part in one in the last 12 months – half (48%) had participated in an event at least monthly and 21% about once a week (Figure 6.2).

[31] 26% of all respondents.

Figure 6.2: Frequency of participation in energy saving events in the last 12 months, among consumers whose household has participated in such an event

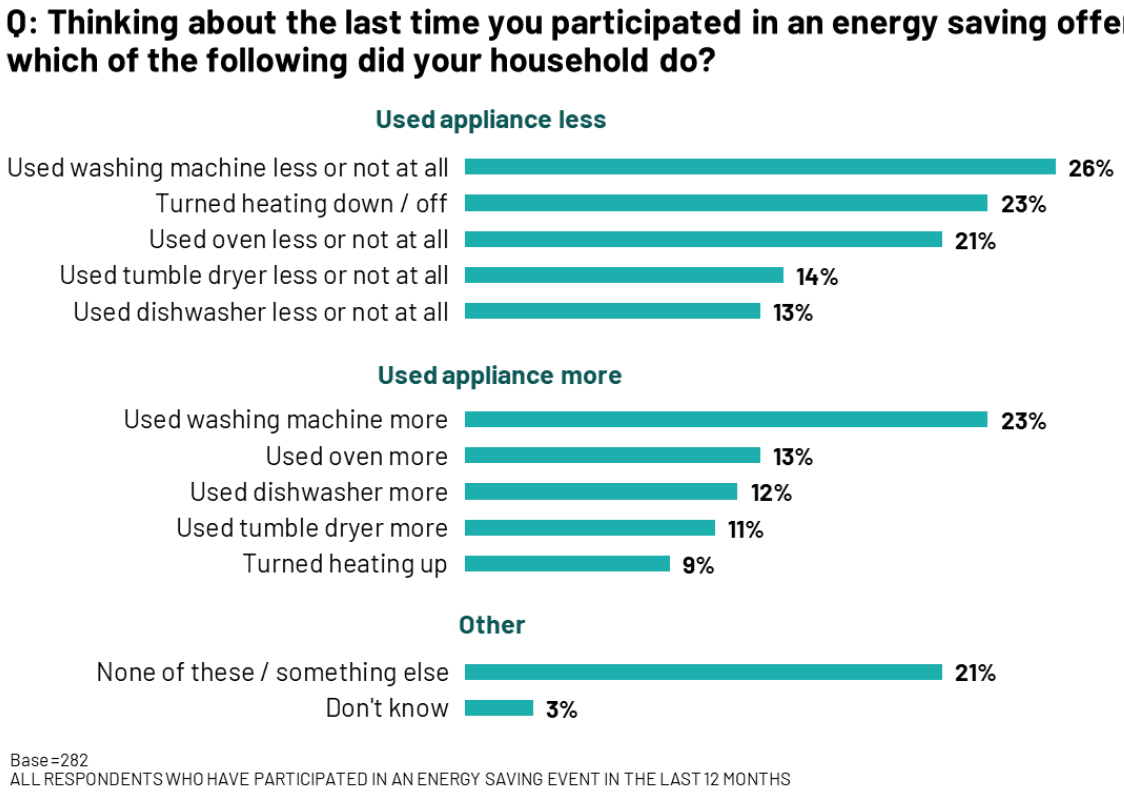


Base = 282
ALL RESPONDENTS WHO HAVE PARTICIPATED IN AN ENERGY SAVING EVENT

Event participants were asked how, if at all, they had changed their energy use the last time they took part in an event. As shown in Figure 6.3, some participants said they had used their heating or household appliances less than they normally would, while others had used them more, likely reflecting the type of event they took part in – e.g. whether they were incentivised to use less energy or whether they were offered cheap or free energy during the event.

The most common behaviours included using washing machines (25%), home heating (23%) or ovens (21%) less or not at all. Meanwhile, others reported that they used appliances such as washing machines (22%), ovens (12%), dishwashers (11%) and tumble dryers (11%) more.

Figure 6.3: Behaviours during an energy saving event

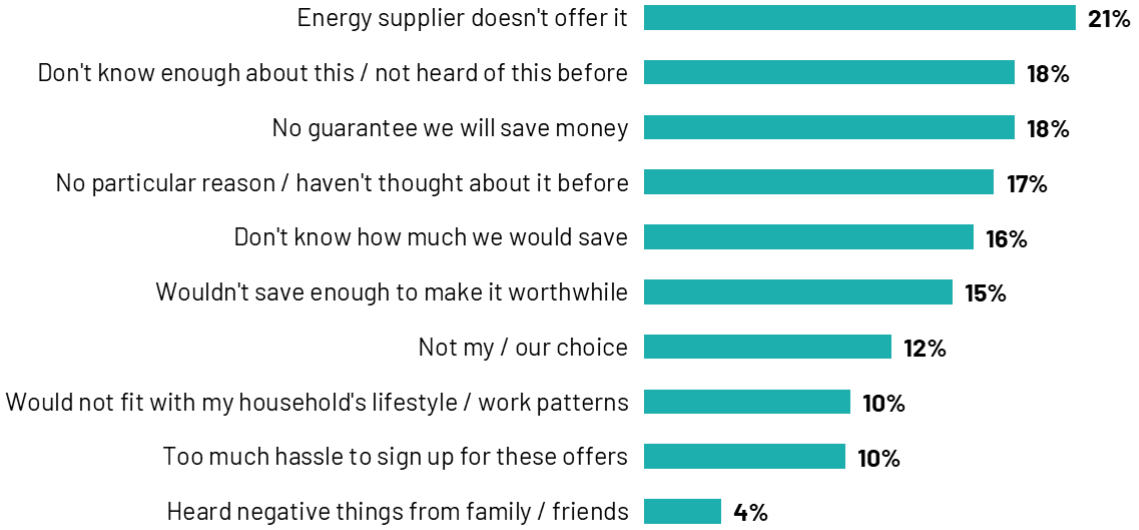


Younger respondents aged under 35 were more likely than older respondents to say they had turned their heating down or off (41%, compared to 18%).

6.4 Barriers to participation in energy saving events

Those who had heard of but not yet participated in an energy saving event (30% of all respondents) said the main reasons for this were perceptions that their energy supplier did not offer these events (21%), a lack of knowledge about them (18%) and uncertainty about the financial benefits of participation – including perceptions that there is no guarantee they would save money (18%), they would not know how much they would save (16%) or they would not save enough to make taking part worthwhile (15%) (Figure 6.4).

Figure 6.4: Main reasons for not having participated in an energy saving event (top ten reasons)



Base=348
ALL RESPONDENTS WHO HAVE HEARD OF BUT HAVE NOT PARTICIPATED IN AN ENERGY SAVING OFFER EVENT

Conclusions

This research sought to understand Scottish domestic electricity consumers' ability and capacity to engage with flexibility services, and to assess the distributional impacts of demand flexibility policies and Time of Use tariffs. Overall, the findings suggested potential for consumer-led flexibility in Scotland, but this potential appeared unevenly distributed and constrained by some technological, financial, practical and attitudinal barriers.

Understanding consumers' ability and capacity to engage with flexibility services

Which types of consumers are currently using flexibility products, services and technologies, and how are they using them?

The research found that adoption of technologies that enable participation in flexibility services varied across different groups of consumers.

Smart meter ownership was relatively widespread, with most consumers (67%) either already having a smart meter, waiting for one to be installed (3%), or willing to consider one in future (15%). However, uptake remained lower among older consumers and those living in rural areas.

Ownership of low carbon and flexibility-related technologies was comparatively limited. Smart heating controls were the most commonly used technology (reported by 24%), while smaller numbers reported having solar panels (12%), EVs or plug-in hybrids (11%), battery storage (5%) or heat pumps (5%). Ownership and intended adoption were typically higher among younger consumers, higher income households, graduates and owner-occupiers.

While there was general willingness to use products that help reduce carbon emissions (55% agreed that they wanted to use such products), particularly among younger respondents and graduates, only a small proportion of consumers (21%) identify as early adopters of new technology.

Smart heating controls represented the most common low carbon technology currently in use, particularly among higher income households. Electric vehicle and heat pump adoption was low, though younger and more affluent households showed a greater likelihood to adopt these technologies in the near future. Adoption of solar panels was more common among those in rural areas and owner-occupiers.

Uptake of Time of Use tariffs was fairly limited. Around a third of respondents (37%) reported being on this type of tariff, while interest in switching among those currently on fixed-rate tariffs was relatively low (17% said they were likely to switch in the next two years). The main barriers to switching related to uncertainty about the potential financial benefits and perceptions that their supplier did not offer a Time of Use tariff, suggesting that increased information and awareness may play an important role in future uptake.

The analysis identified three distinct consumer groups based on ownership and intended adoption of low carbon technologies. Most consumers (57%) were classified as having Low Capability to engage with flexible energy use, and tended to be older, female, and living in lower-income households without children. High Capability consumers (16%) tended to be younger, male and more likely to have children, while Emerging Capability consumers (27%) were more likely to have higher incomes, degree-level qualifications and to own their homes.

What barriers do different types of consumers face to shifting or reducing their energy consumption and benefitting from flexibility products and services?

The research found that cost represented the primary barrier to adoption across almost all low carbon technologies. For example, upfront purchase and installation costs were key barriers to the uptake of EVs, solar panels, battery storage and heat pumps.

Consumer confidence and understanding also appeared to influence engagement. Some consumers reported limited knowledge of technologies such as battery storage, while others were uncertain about whether a Time of Use tariff would save them money.

How 'shiftable' is consumers' electricity consumption, and how dependent is that on price incentives?

A majority of washing machine, dishwasher and tumble dryer users expressed a willingness to shift usage to off-peak times when presented with potential savings. The level of financial incentive strongly influenced responses, with larger savings associated with a greater likelihood of changing behaviour. However, the level of savings that respondents considered worthwhile was often greater than the savings likely to be achieved through shifting appliance use alone. This suggests that while financial incentives can encourage participation, the level of financial benefit available through flexibility may not always be sufficient to motivate behaviour change for all consumers.

Notably, however, some consumers indicated they were willing to shift usage even without financial incentives. Greater public awareness of the broader benefits of off-peak energy may therefore encourage more consumers to shift their energy consumption to off-peak periods.

Practical barriers to shifting limited flexibility potential for many households. These included incompatibility with household routines, noise concerns, and safety worries - particularly for tumble dryer use. Households with children were more likely to currently use appliances during peak times, though many expressed willingness to shift if appropriately incentivised.

What are the drivers of willingness and ability to demand shift?

Willingness to engage with flexible energy use was strongly associated with age, household circumstances and current engagement with low carbon technologies.

Those classed as High Capability consumers, younger respondents, working households and households with children were all more likely to express willingness to shift appliance use. Younger respondents, working households and households with children were also more likely to report using appliances during peak periods. This suggests that these groups may have greater flexibility potential but may also face greater practical challenges in adapting existing routines.

However, there was some reluctance towards more automated forms of flexibility with most respondents expressing discomfort about third-party management of their household energy use. Around 70% of respondents were uncomfortable with a company managing the operation of washing machines, 68% were uncomfortable with management of home heating, and 63% were uncomfortable with management of dishwashers. Electric vehicle owners were notably more comfortable with automated charging with 51% saying they would be comfortable with a company managing when their vehicle charges. In addition, High Capability consumers, younger respondents and those with children were among those more comfortable with automated energy use.

Awareness of energy saving events was relatively high, with 59% reporting they knew at least a little about them, but participation was lower – only 44% of those aware had participated in one. Among those who had taken part, most (90%) reported changing their energy use during these events. The main barriers to participation were limited awareness, perceptions that suppliers did not offer such schemes, and uncertainty about the financial benefits, suggesting opportunities to improve consumer understanding and engagement in these events.

Assessing the distributional impacts of flexibility policies and Time of Use tariffs

Which types of Scottish households would benefit or lose out from Time of Use tariffs assuming no behaviour change, and by how much?

Based solely on reported appliance usage of washing machines, tumble dryers and dishwashers, 58% of consumers were estimated to be better off on a Time of Use tariff than on a fixed-rate tariff. However, these findings do not necessarily reflect overall household electricity usage patterns and should therefore be interpreted with caution.

Consumers who reported lower levels of peak-time appliance use were more likely to benefit from a Time of Use tariff based on their current appliance usage. These included consumers aged 55 and over, households without children, lower-income households, those not in work, and households with gas heating.

Pragmatically, what steps would consumers need to take to 'flex' their energy consumption sufficiently to benefit?

The analysis suggested that shifting appliance use from peak to off-peak periods significantly increased the proportion of households that would benefit from a Time of Use tariff. When respondents' stated willingness to shift usage was taken into account, the proportion estimated to be better off on a Time of Use tariff increased from 58% to 84%, while only 13% were estimated to be better off on a fixed-rate tariff.

If consumers shifted usage in line with their stated willingness to do so, more than eight in ten households would be financially better off on a Time of Use tariff. The potential benefits were broadly distributed across the population, with relatively little variation between most demographic and household groups. While some groups, such as consumers in the High Capability segment, appeared slightly better placed to benefit, the findings suggest that the potential

financial gains from Time of Use tariffs are not confined to particular consumer groups. Lower-income households could also make meaningful savings relative to household income, although they may face greater risks if they would not benefit from a Time of Use tariff.

Those who remained worse off would need to shift an average of 131kWh annual appliance use from peak to off-peak periods before a Time of Use tariff became beneficial (approximately 2 washing machine or dishwasher cycles per week, or 1 tumble drying cycle every 2 weeks).

Ownership of technologies such as EVs and heat pumps increased flexibility potential further. Incorporating current or future ownership of these technologies into the analysis increased the estimated proportion of consumers who would benefit from a Time of Use tariff.

How willing /able are different types of households to shift that amount of demand?

Overall, a majority of respondents were willing to shift at least some appliance use to off-peak times in response to potential financial savings, although this was not distributed evenly across all households.

High Capability consumers (16% of respondents) were generally more willing to shift appliance use and appeared better placed to benefit from Time of Use tariffs and energy saving events. Younger respondents, households with children and working households also reported higher levels of willingness to change energy use patterns. At the same time, these groups often reported greater levels of peak-time energy use and therefore faced practical constraints associated with changing established routines.

Consumers in the Low Capability group (57% of respondents) and older consumers appeared less well placed to engage with flexible energy use, reflecting lower levels of technology ownership and lower access to products that can support demand shifting.

Emerging Capability consumers (27% of respondents) may represent an important group whose ability to benefit from flexibility services could increase as intended technology adoption takes place.

What level of incentives and type of support would be necessary to enable different types of consumers to flex their demand sufficiently to benefit from Time of Use tariffs?

The findings indicated that financial incentives were an important driver of consumer engagement. Willingness to shift energy use increased consistently as potential savings increased.

However, financial incentives alone appeared unlikely to be sufficient. Many consumers also required clearer information about how flexibility services worked and how much they could save.

The findings also highlighted the importance of wider support measures, including improving consumers' understanding of the potential benefits of Time of Use tariffs, supporting access to

technologies that enable demand flexibility, and ensuring that flexibility services are designed in ways that reflect the practical constraints some households face when shifting energy use.

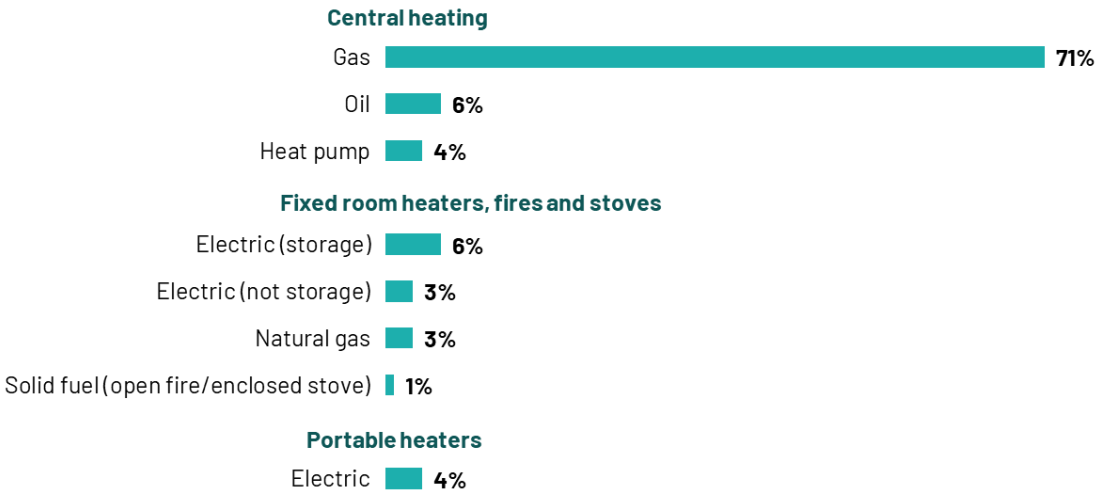
Appendix A: Home heating and energy bills

Household heating

A majority of respondents (71%) used gas central heating as their main home heating source, while 12% used electricity – either fixed room or portable heaters (6% used electric storage heaters). A further 6% said that they heat their home using oil central heating. Just 4% reported they used a heat pump (Figure 1 below).

Figure 1: Main heating source

Q: Which of the following is the main way your household heats your home?



Base = 1,094
ALL RESPONDENTS WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS AND MORE THAN ONE TYPE OF HEAT FOR HOME

Certain differences among sub-groups of respondents were evident. Owner-occupiers were more likely that those renting their property to use gas as their main heating source (73%, compared to 66%[32]), while those living in rented accommodation were more likely to use electricity (18%[33], compared to 9% of owner-occupiers).

In terms of location, respondents living in urban areas were more likely than those in rural areas to use gas (78% compared to 38%), while those in rural areas were more likely to use oil (26%, compared to 2%) or heat pumps (12%, compared to 2%).

[32] 67% of social renters and 64% of private renters.
[33] 18% of social renters and 19% of private renters.

Energy bills

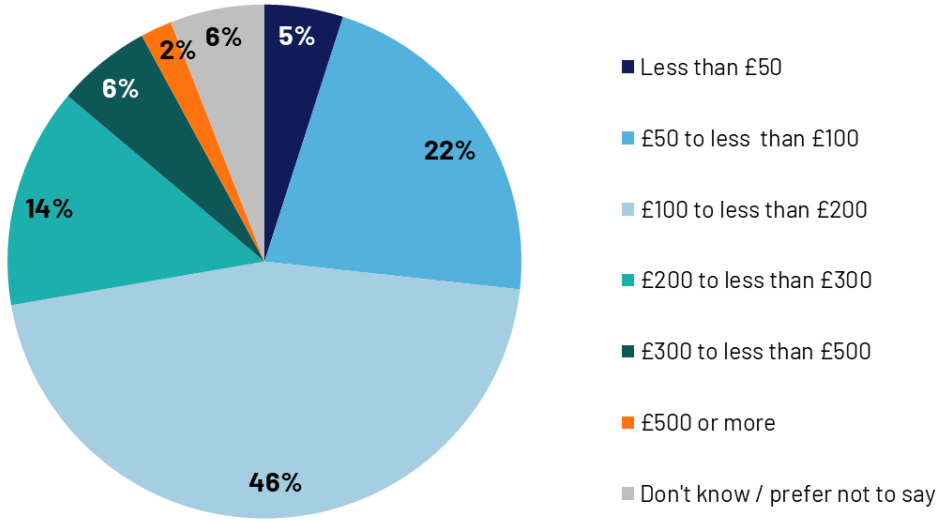
The majority of respondents reported settling their energy bills through monthly or quarterly direct debit, with 83% using this method for gas and 80% for electricity payments. Around one in ten used a prepayment meter for their gas (11%) or electricity bills (10%).

Respondents were asked to estimate their average monthly household energy bills. As bill amounts may vary depending on the time of year and current household composition and situation, respondents were asked to do this with reference to the current point in time (February 2026, when the survey fieldwork was conducted).

Almost half (46%) of respondents said their monthly energy bill was between £100 and £200, while a quarter (26%) said their bill was less than £100 per month. Two in ten (22%) paid more than £200 per month (Figure 2 below).

Figure 2: Household monthly energy bill costs

Q: Which of the following is closest to your total average household energy bills / costs each month currently?



Base: =1,094
ALL RESPONDENTS WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAY

As would be expected, household energy bills tended to increase with household size. Larger households of three or more people (32%) and those with children (31%) were more likely to pay monthly energy bills of £200 or more, compared to smaller households of one or two people (16%) and households without children (19%).

Rural households were also more likely to pay £200 or more a month of energy bills (30%, compared to 20% of urban households).

Financial resilience

Respondents were asked two questions to gauge how well their household was managing financially: one asked how well they keep up with their bills and credit commitments in general,

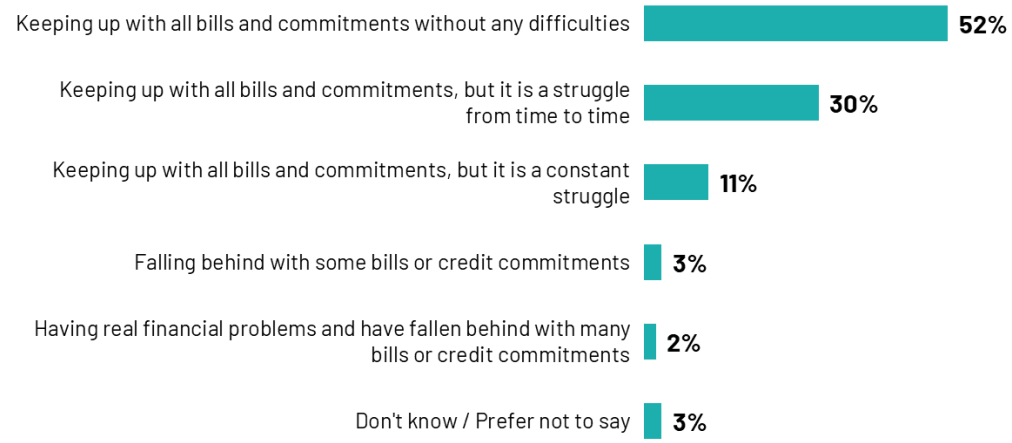
and another specifically about how the household was keeping up with energy bills or topping up their energy meter.

Keeping up with bills and credit commitments

While around half (52%) said that they were currently keeping up well with their bills and credit commitments without any difficulties, a significant minority reported facing financial strain. Nearly a third (30%) said that they were keeping up, but it was a struggle from time to time, and 11% reported a constant struggle. Meanwhile, 5% reported they were having real financial problems and / or falling behind with bills or credit commitments. This equates to 46% who struggle with their financial commitments at least some of the time (Figure 3 below).

Figure 3: Keeping up with bills and credit commitments

Q: Which one of the following statements best describes how well you are keeping up with all of your bills and credit commitments at the moment?



Base=1094
ALL RESPONDENTS WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS

The following groups were more likely to say they were constantly struggling or falling behind with bills:

- Those living in rented accommodation – 26%[34], compared to 11% of owner-occupiers
- Those in the most deprived areas (SIMD 1) – 22%, compared to 10% in SIMD 5
- Households with children – 21%, compared to 15% of households without children
- Aged 16 to 34 – 20%, compared to 15% aged 35 and above.

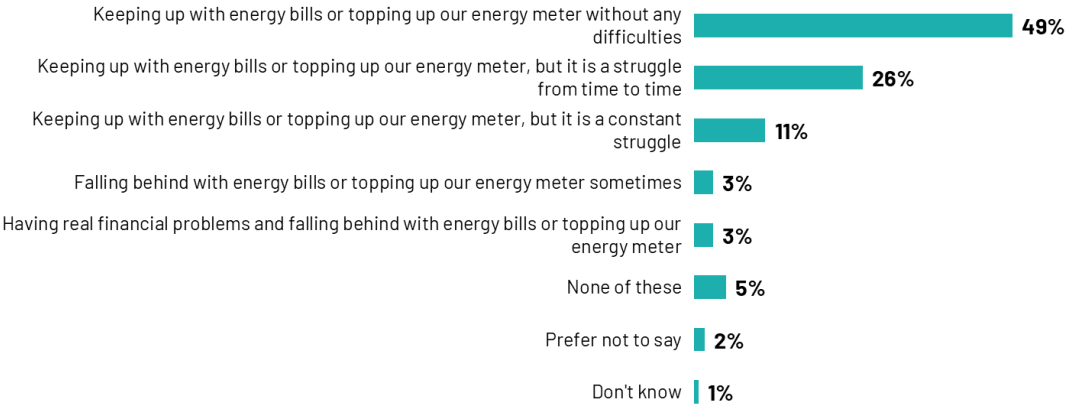
[34] 32% of social renters and 19% of private renters.

Keeping up with energy bills

When asked specifically about how their household was keeping up with energy bills or topping up their energy meter, a similar trend emerged. Around half (49%) of respondents said they were keeping up without any difficulties. A quarter (26%) said they managed to keep up but that it was a struggle from time to time, while one in ten (11%) reported it was a constant struggle. Additionally, 3% of respondents were having real financial problems and/or falling behind with bills or credit commitments (Figure 4 below).

Figure 4: Keeping up with energy bills

Q: Which, if any, of the following statements best describes how well your household is keeping up with your energy bills or topping up your energy meter specifically at the moment?



Base = 1094
ALL RESPONDENTS WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS

The specific groups most likely to report constantly struggling or falling behind with energy bills broadly aligned with those facing difficulties with general bill and credit commitments. These included:

- Those living in rented accommodation – 30%[35], compared to 11% of owner-occupiers.
- Those in the most deprived areas (SIMD 1) – 24%, compared to 9% in SIMD 5.
- Households with children – 24% reported difficulties, compared to 15% of households without children.

[35] 33% of social renters and 26% of private renters.

Appendix B: Survey questionnaire

ALL ADULTS IN SCOTLAND 16+
FILTER: REGION= SCOTLAND AND AGE 16+
NEW SCREEN

INTRO: Thank you for taking the time to participate in this survey. We would like to ask you some questions about how your household uses energy, on behalf of Consumer Scotland. Consumer Scotland supports and represents the interests of consumers in Scotland to ensure they have affordable access to heat and power.

First, we'd like to ask you a few questions about you and your household.-

BASE: ALL ADULTS IN SCOTLAND 16+
FILTER: REGION= SCOTLAND AND AGE 16+

QTEN: Which of these applies to your home?

SINGLE CODE

1. Being bought on a mortgage
2. Owned outright by household
3. Rented from a local authority
4. Rented from a Housing association/Trust
5. Rented from a private landlord
6. Other

98. Don't know

7. Prefer not to say

BASE: ALL ADULTS IN SCOTLAND 16+
FILTER: REGION= SCOTLAND AND AGE 16+

QPOW. Do you have mains gas and/or mains electricity in your household?
Please select one option only

SINGLE CODE

1. Both mains gas and mains electricity
2. Mains electricity only
3. Mains gas only
4. Neither mains gas nor mains electricity **[GO TO END OF TOPIC]**
98. Don't know **[GO TO END OF TOPIC]**
99. Prefer not to say **[GO TO END OF TOPIC]**

BASE: ALL ADULTS IN SCOTLAND 16+ WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY
FILTER: QPOW=1-3

QRESP. Are you responsible – individually or with another household member – for your household's energy bills and/or for choosing your household's energy supplier?

Please select one option only

SINGLE CODE

1. Solely responsible
2. Jointly responsible (e.g. with a partner or housemate)

3. No responsibility, other person/people in household are responsible **[GO TO END OF TOPIC]**
4. No responsibility, landlord organises and pays energy bills (e.g. included in rent)
98. Don't know **[GO TO END OF TOPIC]**
99. Prefer not to say **[GO TO END OF TOPIC]**

BASE: ALL ADULTS IN SCOTLAND 16+ WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS
FILTER: QPOW=1-3 AND QRESP=1,2 OR 4

QHEAT1. In which, if any, of the following ways does your household heat your home?

Please select all that apply
MULTICODE 1-15. RANDOMISE ORDER OF BLOCK A-D, KEEP BLOCK D AT THE END

BLOCK A, RANDOMISE 1-5, KEEP CODES 3-4 TOGETHER
Central heating
1. Gas
2. Oil
3. Solid fuel – coal
4. Solid fuel – biomass (for example wood)
5. Heat pump

BLOCK B, RANDOMISE 6-11, KEEP TOGETHER CODES 6-7; 9-10
Fixed room heaters, fires and stoves
6. Electric (storage)
7. Electric (not storage)
8. Natural gas
9. Solid fuel (open fire/enclosed stove) – coal
10. Solid fuel (open fire/enclosed stove) – wood
11. LPG (liquified petroleum gas)

BLOCK C
Portable heaters
12. Electric
13. Other portable heater

BLOCK D
Other
14. Communal or district heating (heat networks)
15. Something else

98. Don't know **[ANCHOR, EXCLUSIVE]**

BASE: ALL ADULTS IN SCOTLAND 16+ WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS AND MORE THAN ONE TYPE OF HEAT FOR HOME
FILTER: QPOW=1-3 AND QRESP=1,2 OR 4 AND QHEAT1= >1

QHEAT2. And which of the following is the main way your household heats your home?

Please select only one
SINGLE CODE. MASK LIST FROM QHEAT1, SHOW BLOCKS IN SAME ORDER AS QHEAT1

BLOCK A RANDOMISE 1-5, KEEP CODES 3-4 TOGETHER
Central heating

1. Gas
2. Oil
3. Solid fuel – coal
4. Solid fuel – biomass (for example wood)
5. Heat pump

BLOCK B, RANDOMISE 6-11, KEEP TOGETHER CODES 6-7; 9-10

Fixed room heaters, fires and stoves

6. Electric (storage)
7. Electric (not storage)
8. Natural gas
9. Solid fuel (open fire/enclosed stove) – coal
10. Solid fuel (open fire/enclosed stove) – wood
11. LPG (liquified petroleum gas)

BLOCK C

Portable heaters

12. Electric
13. Other portable heater

BLOCK D

Other

14. Communal or district heating (heat networks)
15. Something else

98. Don't know **[ANCHOR, EXCLUSIVE]**

BASE: ALL ADULTS IN SCOTLAND 16+ WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAY

FILTER: QPOW=1 OR 3 AND QRESP=1,2 OR 4

QESUPa. Is your household's gas and electricity supplied by the same energy supplier?

SINGLE CODE

1. Yes
2. No
98. Don't know

BASE: ALL ADULTS IN SCOTLAND 16+ WHO HAVE MAINS ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS

FILTER: QPOW=1 OR 2 AND QRESP=1,2 OR 4

QESUPb. How does your household pay for your electricity?

Please select one option only

SINGLE CODE

1. Monthly/quarterly direct debit (where your energy supplier takes an agreed amount from your bank account automatically)
2. Pay by cheque, cash or card on receipt of a bill from your energy supplier
3. Prepayment meter, where you top up credit onto a key or card
4. Prepayment meter, where you top up credit online or using a mobile app
5. Pay to an intermediary such as a landlord, housing manager, site owner or someone else
6. Pay in another way

98. Don't know

BASE: ALL ADULTS IN SCOTLAND 16+ WHO HAVE MAINS GAS SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS
FILTER: QPOW=1 OR 3 AND QRESP=1,2 OR 4

QESUPc. How does your household pay for your gas?

Please select one option only
SINGLE CODE

1. Monthly/quarterly direct debit (where your energy supplier takes an agreed amount from your bank account automatically)
2. Pay by cheque, cash or card on receipt of a bill from your energy supplier
3. Prepayment meter, where you top up credit onto a key or card
4. Prepayment meter, where you top up credit online or using a mobile app
5. Pay to an intermediary such as a landlord, housing manager, site owner or someone else
6. Pay in another way

98. Don't know

BASE: ALL ADULTS IN SCOTLAND 16+ WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAY
FILTER: QPOW=1-3 AND QRESP=1,2 OR 4

QBILL. Which of the following is closest to your total average household energy bills / costs each month currently?

If you use an energy source besides mains gas or electricity for heating rooms or water for powering your home, such as oil, liquid or bottled gas or solid fuels, please include the costs for these as well.

If you are not sure, please give your best estimate.

SINGLE CODE, FORWARD/REVERSE 1-10

1. Less than £25
2. £25 to less than £50
3. £50 to less than £75
4. 75 to less than £100
5.. £100 to less than £150
6.. £150 to less than £200
7. £200 to less than £300
8. £300 to less than £400
9. £400 to less than £500
10. £500 or more
98. Don't know
99. Prefer not to say

BASE: ALL ADULTS IN SCOTLAND 16+ WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS
FILTER: QPOW=1-3 AND QRESP=1,2 OR 4

QCARS. In total, how many cars or vans are owned, or available for use, by members of your household?

Please include any company car(s) or van(s) available for private use.

Please select one option only
SINGLE CODE

1. None
2. 1
3. 2
4. 3
5. 4 or more
98. Don't know
99. Prefer not to say

Attitudes towards low carbon and flexibility products and services

BASE: ALL ADULTS IN SCOTLAND 16+ WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS
FILTER: QPOW=1-3 AND QRESP=1,2 OR 4
SHOW SCREEN

We'd now like to ask some questions about some products or services that you may be aware of.

BASE: ALL ADULTS IN SCOTLAND 16+ WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS
FILTER: QPOW=1-3 AND QRESP=1,2 OR 4

QATT. To what extent do you agree or disagree with the following statements?

Please select one option only per statement

PROGRESSIVE GRID
ROWS, RANDOMISE 1-2
1. My household is usually among the first to try a new technology when it appears on the market
2. My household wants to use products and services that help to reduce carbon emissions

COLUMNS, FORWARD/REVERSE CODES 1-5, SINGLE CODE

1. Strongly agree
2. Tend to agree
3. Neither agree nor disagree
4. Tend to disagree
5. Strongly disagree
98. Don't know

BASE: ALL ADULTS IN SCOTLAND 16+ WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS
FILTER: QPOW=1-3 AND QRESP=1,2 OR 4

QAPP. Which, if any, of the following products or appliances does your household currently use at home?

[HOVER OVER FOR OPTION 1 – 'plug in hybrid': 'A Plug-in Hybrid Electric Vehicle (PHEV) has both a battery you can plug in to charge at home and a petrol or diesel engine'**]**

Please select all that apply

MULTICODE AND RANDOMISE CODES 1 – 7

1. A fully electric or 'plug in hybrid' car or van (that you plug in and charge) **[ADD IN HOVER OVER OPTION 1 AS ABOVE]**
2. Solar panels
3. Home battery storage for electricity (large battery which allows storing electricity for later use. Common brands include GiveEnergy All in One Battery, Tesla Powerwall)
4. Washing machine or combined washer/dryer (any type)
5. Standalone tumble dryer
6. Dishwasher
7. Smart home heating controls (e.g. Hive, Google Nest) or smart thermostatic radiator valves ('TRVs'). [These enable you to programme your boiler or heating system online/by smart phone]
8. None of these

98. Don't know

BASE: ALL ADULTS IN SCOTLAND 16+ WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS
FILTER: QPOW=1-3 AND QRESP=1,2 OR 4

QNAPP. For which, if any, of the following reasons does your household **not** have the following products or appliances?

Please select all that apply

COLLAPSIBLE GRID

ROWS

1.Solar panels **[DO NOT SHOW IF QAPP=2]**

2.Home battery storage for electricity (large battery which allows storing electricity for later use. Common brands include GiveEnergy All in One Battery, Tesla Powerwall) **[DO NOT SHOW IF QAPP=3]**

3.Storage heaters (electric heaters that generate and store heat during the night and release the heat when needed e.g. to warm your home during the day) **[DO NOT SHOW IF QHEAT1= 6]**

4.Smart heating controls or smart thermostatic radiator valves ('TRVs'). These enable you to programme your boiler or heating system online/by smart phone **[DO NOT SHOW IF QAPP=7]**

COLUMNS, MULTICODE AND RANDOMISE CODES 1 - 11

1. Costs too much to purchase and / or install
2. Not suitable for home
3. Not suitable for lifestyle / work pattern
4. Too difficult to install
5. Don't know enough about it
6. Haven't got round to it yet
7. In the process of getting this
8. Not cost-effective/worth it
9. Not needed/wanted
10. Not my choice (e.g. renting)
11. Have heard of negative experiences
12. None of these

98. Don't know

BASE: ALL ADULTS IN SCOTLAND 16+ WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS
FILTER: QPOW=1-3 AND QRESP=1,2 OR 4

QSM. Does your household have a smart meter, or not?

A smart meter sends your energy supplier meter readings automatically. It may also have a display device which shows you how much energy you are using in near real-time.

SINGLE CODE

1. Yes
2. No, but I would consider getting one in future
3. No, but I am waiting for one to be installed
4. No, and I would not consider getting one in future
5. Don't know

BASE: ALL ADULTS IN SCOTLAND 16+ WHO WOULD NOT CONSIDER GETTING A SMART METER
FILTER=QSM=4

QNSM. What are the main reasons why you would not consider getting a smart meter in future?

Please select up to three

MULTICODE 1-9 OR 11, UP TO THREE CODES. RANDOMISE CODES 1 - 9,

1. Don't know enough about them / not heard of them before
2. Do not know how to go about getting one
3. Would not use it
4. No guarantee it would save my household money
5. Too much hassle to get one installed
6. Heard negative things from family / friends
7. Heard negative things in the media
8. Not my / our choice
9. Not needed/wanted
10. No particular reason / haven't thought about it before
11. Another reason

98. Don't know

BASE: ALL ADULTS IN SCOTLAND 16+ WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS
FILTER: QPOW=1-3 AND QRESP=1,2 OR 4

QTAR1. Does your household pay different amounts for its energy depending on when you use it?

This could mean you pay less for your energy at certain times during the day or night, or at weekends.

SINGLE CODE

1. Yes
2. No

98. Don't know

BASE: ALL ADULTS IN SCOTLAND 16+ WHO PAY DIFFERENT AMOUNTS FOR ENERGY DEPENDING ON TIME OF DAY/WEEK
ASK IF QTAR1 = 1

QTAR2. Some suppliers offer energy tariffs that charge consumers cheaper 'off-peak' rates for their energy at times of night or day when demand is at its lowest, and higher 'peak' rates at more popular times. These are called Time of Use tariffs and can include Economy 7 or Economy 10 meters.

Is your household on one of these meters or tariffs?

Please one option only

SINGLE CODE

1. Yes – an Economy 7 or Economy 10 meter **[SHOW IF QSM IS NOT 1]**
2. Yes – a Time of Use tariff where energy is cheaper at set times of the day or night **[SHOW IF QSM = 1]**
3. Yes – a dynamic tariff where the price of energy can change at any time of the day or the night (for example, Agile Octopus or EDF FreePhase) **[SHOW IF QSM = 1]**
4. Yes – but I'm not sure which type
5. None of these

98. Don't know

Appliances and flexible energy use questions

BASE: ALL ADULTS IN SCOTLAND 16+ WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS, AND HAS A WASHING MACHINE AND/OR TUMBLE DRYER AND OR DISHWASHER
FILTER: QPOW=1-3 AND QRESP=1,2 OR 4 AND QAPP=4,5,6
SHOW SCREEN

Now we have some questions specifically about how your household uses your appliances.

BASE: ALL ADULTS IN SCOTLAND 16+ WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS, AND HAVE A WASHING MACHINE
FILTER: QPOW=1-3 AND QRESP=1,2 OR 4 AND QAPP=4

APWM0. In a typical week, how often does your household use your washing machine or combined washer/dryer ?

Please select one option only
SINGLE CODE, FORWARD/REVERSE 1-7

1. More than once a day
2. Once a day
3. 4-6 times a week
4. 2-3 times a week
5. Once a week
6. Less than once a week
7. Never

98. Don't know

BASE: ALL ADULTS IN SCOTLAND 16+ WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS, AND HAVE A WASHING MACHINE
FILTER: QPOW=1-3 AND QRESP=1,2 OR 4 AND QAPP=4,

APWM1. What time of day does your household usually run the washing machine machine or combined washer/dryer ?

If an external company controls when the appliance runs, please say when they usually run it.

Please select all that apply
MULTICODE 1-9

1. Between 8am – 11am
2. Between 11am – 1 pm
3. Between 1pm – 4pm

4. Between 4pm – 7pm
5. Between 7pm – 10pm
6. Between 10pm – 1am
7. Between 1am – 4am
8. Between 4am – 6am
9. Between 6am – 8am
10. It varies
11. Don't know

BASE: ALL ADULTS IN SCOTLAND 16+ WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS, AND HAVE A WASHING MACHINE

FILTER: QPOW=1-3 AND QRESP=1,2 OR 4 AND QAPP=4

APWM2. Does your household's washing machine or combined washer/dryer have a way to delay running it after loading (e.g. through an app or delay function)?

Please select all that apply

MULTICODE 1-2, ROTATE 1-2

1. Yes, through an app
2. Yes, through a delay function on the appliance
3. No, it does not have this feature **[EXCLUSIVE]**
4. Don't know **[EXCLUSIVE]**

BASE: ALL ADULTS IN SCOTLAND 16+ WHO RUN WASHING MACHINE/COMBINED WASHER/DRYER AT PEAK TIMES
FILTER: APWM1=1, 4, 5 OR 10
SHOW SCREEN

INT_APWM3. On the next screen there will be some text about how your household uses its washing machine that we would like you to read and understand before answering.

Then when you are ready, please move onto the next questions.

SPLIT SAMPLE 50:50 INTO BLOCK A AND B. HALF START WITH APMW3_1 TO APMW3_5 AND HALF START WITH APMW3_5 TO APMW3_1, BASED ON LOGIC CONDITIONS SET BELOW.

START	APMW3_1	APMW3_2	APMW3_3	APMW3_4	APMW3_5
	£0	£50	£100	£150	£200
BLOCK A (50%)	APMW3_1=1 GO TO INT_APWM4	IF APMW3_2=1 GO TO INT_APWM4	IF APMW3_3=1 GO TO INT_APWM4	IF APMW3_4=1 GO TO INT_APWM4	APMW3_5= 1 - 5 GO TO INT_APWM4
	IF APWM3_1=2-5 GO TO APWM3_2	IF APMW3_2=2-5 GO TO APWM3_3	IF APMW3_3=2-5 GO TO APWM3_4	IF APMW3_4=2-5 GO TO APWM3_5	

START	APMW3_5	APMW3_4	APMW3_3	APMW3_2	APMW3_1
	£200	£150	£100	£50	£0
BLOCK B (50%)	IF APMW3_5=5 GO TO INT_APWM4	IF APMW3_4=5 GO TO INT_APWM4	IF APMW3_3=5 GO TO INT_APWM4	IF APMW3_2=5 GO TO INT_APWM4	APMW3_1=1-5 GO TO INT_APWM4
	IF APMW3_5=1-4 GO TO APWM3_4	IF APMW3_4=1-4 GO TO APWM3_3	IF APMW3_3=1-4 GO TO APWM3_2	IF APMW3_2=1-4 GO TO APWM3_1	

BASE: ALL ADULTS IN SCOTLAND 16+ WHO RUN WASHING MACHINE/COMBINED WASHER/DRYER AT PEAK TIMES
FILTER: APWM1=1 OR 4, 5 OR 10

APWM3_1. How likely, if at all, would your household be to move your washing machine/ combined washer-dryer use from peak to 'off peak' times **[HOVER OVER TEXT FOR 'OFF PEAK'** <between 10pm – 8am or 11am – 4pm>**]** if you could save **£0** per year on your energy bills?

SINGLE CODE. FORWARD/REVERSE 1-5.

1. Definitely would
2. Probably would
3. Not sure
4. Probably would not
5. Definitely would not

APWM3_2. How likely, if at all, would your household be to move your washing machine/ combined washer-dryer use from peak to 'off peak' times **[HOVER OVER TEXT FOR 'OFF PEAK'** <between 10pm – 8am or 11am – 4pm>**]** if if you could save **£50** per year on your energy bills?

SINGLE CODE FORWARD/REVERSE 1-5

1. Definitely would
2. Probably would
3. Not sure
4. Probably would not
5. Definitely would not

APWM3_3. How likely, if at all, would your household be to move your washing machine/ combined washer-dryer use from peak to 'off peak' times **[HOVER OVER TEXT FOR 'OFF PEAK'** <between 10pm – 8am or 11am – 4pm>**]** if if you could save **£100** per year on your energy bills?

SINGLE CODE FORWARD/REVERSE 1-5.

1. Definitely would
2. Probably would
3. Not sure
4. Probably would not
5. Definitely would not

APWM3_4. How likely, if at all, would your household be to move your washing machine/ combined washer-dryer use from peak to 'off peak' times **[HOVER OVER TEXT FOR 'OFF PEAK'** <between 10pm – 8am or 11am – 4pm>**]** if if you could save **£150** per year on your energy bills?

SINGLE CODE FORWARD/REVERSE 1-5.

1. Definitely would
2. Probably would
3. Not sure
4. Probably would not
5. Definitely would not

APWM3_5. How likely, if at all, would your household be to move your washing machine/ combined washer-dryer use from peak to 'off peak' times **[HOVER OVER TEXT FOR 'OFF PEAK'** <between 10pm – 8am or 11am – 4pm>**]** if if you could save **£200** per year on your energy bills?

SINGLE CODE FORWARD/REVERSE 1-5

1. Definitely would
2. Probably would
3. Not sure
4. Probably would not
5. Definitely would not

BASE: ALL ADULTS IN SCOTLAND 16+ WHO RUN WASHING MACHINE/COMBINED WASHER/DRYER AT PEAK TIMES
FILTER: APWM1=1 OR 4, 5 OR 10
SHOW SCREEN

INT_APWM4. Again, on the next screen there will be some text about how your household uses its washing machine / combined washer/dryer that we would like you to read and understand before answering.

Then when you are ready, please move onto the next questions.

BASE: ALL ADULTS IN SCOTLAND 16+ WHO RUN WASHING MACHINE/COMBINED WASHER/DRYER AT PEAK TIMES
FILTER: APWM1=1 OR 4, 5 OR 10

APWM4. The average cost of electricity for a wash cycle is 40p. Imagine the cost was reduced by half to 20p during **'off peak'** times **[HOVER OVER TEXT FOR 'OFF PEAK'** <between 10pm – 8am or 11am – 4pm>**]** For a household that does 4 wash loads per week off peak, they would save around £41 a year.

What proportion of your wash loads that you currently do at peak times would your household be willing and able to move to 'off peak' times to make these savings?

Please select one option only

SINGLE CODE, FORWARD/REVERSE 1 – 5,

1. All of them (100%)
2. Almost all of them (more than 75%)
3. Most of them (about 50-75%)
4. Some of them (more than 25%, but less than 50%)
5. A few of them (less than 25%)
6. None of them
7. I do not run my washing machine during peak times**[SHOW ONLY IF APWM1 = 10]**

98. Don't know

BASE: ALL ADULTS IN SCOTLAND 16+ WHO COULD SHIFT NO MORE THAN 25% OF WASHING MACHINE/COMBINED WASHER/DRYER USE TO OFF PEAK TIMES
FILTER: APWM4=5-6

APWM5. Which, if any, of the following reasons limits your household's ability to switch some or all of your energy consumption for running your washing machine/wash cycles to 'off peak' times?

Please select all that apply

MULTICODE 1-14, RANDOMISE 1-13

1. Too noisy to run during the night
2. Would need a smart meter to take advantage of 'off peak' energy costs / can't install smart meter **[SHOW IF QSM = NOT 1]**
3. Would need additional / new appliances / technology to benefit (e.g. smart appliances, appliances with delay functions, timers)
4. Would not fit with my household's lifestyle / work patterns
5. Would not want to leave damp clothes in the machine
6. Don't know enough about this / not heard of this before
7. Don't know how much we would save
8. No guarantee we would save money
9. Heard negative things about this from family / friends
10. Heard negative things about this in the media
11. Not my / our choice – don't control when it runs
12. Wouldn't save enough to make it worthwhile
13. Safety concerns
14. Another reason
15. None of these

98. Don't know

Tumble dryers and dishwashers

BASE: ALL ADULTS IN SCOTLAND 16+ WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS, AND HAVE A TUMBLE DRYER

FILTER: QPOW = 1-3 AND QRESP = 1, 2 or 4 AND QAPP = 5

APTD1. The next few questions are about your tumble dryer.

In a typical week, how often does your household use your tumble dryer?

Please select one option only
SINGLE CODE. FORWARD/REVERSE 1-7

1. More than once a day
2. Once a day
3. 4-6 times a week
4. 2-3 times a week
5. Once a week
6. Less than once a week
7. Never
98. Don't know

BASE: ALL ADULTS IN SCOTLAND 16+ WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS, AND HAVE A TUMBLE DRYER

FILTER: QPOW = 1-3 AND QRESP = 1, 2 or 4 AND QAPP = 5

APTD2. What time of day does your household usually run the tumble dryer?

If an external company controls when the appliance runs, please say when they usually run it.

Please select all that apply.
MULTICODE 1-9

1. Between 8am – 11am
2. Between 11am – 1 pm
3. Between 1pm – 4pm
4. Between 4pm – 7pm
5. Between 7pm – 10pm
6. Between 10pm – 1am
7. Between 1am – 4am
8. Between 4am – 6am
9. Between 6am – 8am
10. It varies
98. Don't know

BASE: ALL ADULTS IN SCOTLAND 16+ WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS, AND HAVE A TUMBLE DRYER
FILTER: APTD2=1 OR 4, 5 OR 10

APTD3. The average cost of electricity for a dryer cycle is £1.25p. Imagine the cost was reduced by half to 63p during **'off peak'** times **[HOVER OVER FOR 'OFF PEAK' -** <between 10pm – 8am or 11am – 4pm**>].** For a household that does four dryer loads per week off peak, they would save around £129 a year.

What proportion of your dryer loads that you currently do at peak times, if any, would your household be willing and able to move to 'off peak' times to make these savings?

Please select one option only
SINGLE CODE, FORWARD/REVERSE 1-7.

1. All of them (100%)
2. Almost all of them (more than 75%)
3. Most of them (about 50-75%)
4. Some of them (more than 25%, but less than 50%)
5. A few of them (less than 25%)
6. None of them
7. I do not run my tumble dryer during peak times **[SHOW ONLY IF APTD2 = 10]**

98. Don't know

BASE: ALL ADULTS IN SCOTLAND 16+ WHO COULD SHIFT NO MORE THAN 25% OF TUMBLE DRYER USAGE TO OFF PEAK TIMES
FILTER=APTD3=5-6

APTD4. Which, if any, of the following reasons limits your household's ability to switch some or all of your tumble dryer use to 'off peak' times?

Please select all that apply
MULTICODE 1-13, RANDOMISE 1-12

1. Too noisy to run during the night
2. Would need a smart meter to take advantage of 'off peak' energy costs / can't install smart meter **[SHOW IF QSM = NOT 1]**
3. Would need additional / new appliances / technology to benefit (e.g. smart appliances, appliances with delay functions, timers)
4. Would not fit with my household's lifestyle / work patterns
5. Don't know enough about this / not heard of this before
6. Don't know how much we would save
7. No guarantee we would save money
8. Heard negative things about this from family / friends
9. Heard negative things about this in the media
10. Not my / our choice – don't control when it runs
11. Wouldn't save enough to make it worthwhile
12. Safety concerns
13. Another reason
14. None of these
98. Don't know

BASE: ALL ADULTS IN SCOTLAND 16+ WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS, AND HAVE A DISHWASHER
FILTER: QPOW = 1-3 AND QRESP = 1, 2 OR 4 AND QAPP = 6

APDW1. The next few questions are about your dishwasher.

In a typical week, how often does your household use your dishwasher?

Please select one option only
SINGLE CODE, FORWARD/REVERSE CODES 1-7

1. More than once a day
2. Once a day
3. 4-6 times a week
4. 2-3 times a week
5. Once a week
6. Less than once a week
7. Never
98. Don't know

BASE: ALL ADULTS IN SCOTLAND 16+ WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS, AND HAVE A DISHWASHER
FILTER: QPOW = 1-3 AND QRESP = 1, 2 OR 4 AND QAPP = 6

APDW2. What time of day does your household usually run the dishwasher?

If an external company controls when the appliance runs, please say when they usually run it.

Please select all that apply.
MULTICODE 1-9

1. Between 8am – 11am
2. Between 11am – 1 pm
3. Between 1pm – 4pm
4. Between 4pm – 7pm
5. Between 7pm – 10pm
6. Between 10pm – 1am
7. Between 1am – 4am
8. Between 4am – 6am
9. Between 6am – 8am
10. It varies
11. Don't know

BASE: ALL ADULTS IN SCOTLAND 16+ WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS, AND HAVE A DISHWASHER
FILTER: APDW2=1 OR 4, 5 OR 10

APDW3. The average cost of electricity for a dishwasher cycle is 28p. Imagine the cost was reduced by half to 14p during '**off peak'** times **[HOVER OVER FOR 'OFF PEAK' <**between 10pm – 8am or 11am – 4pm**>].** For a household that does four dishwasher loads per week off peak, they would save around £29 a year.

What proportion of your dishwasher loads that you currently do at peak times, if any, would your household be willing and able to move to 'off peak' times to make these savings?

Please select one option only

SINGLE CODE, FORWARD/REVERSE CODES 1-7.

1. All of them (100%)
2. Almost all of them (more than 75%)
3. Most of them (about 50-75%)
4. Some of them (more than 25%, but less than 50%)
5. A few of them (less than 25%)
6. None of them
7. I do not run my dishwasher during peak times. **[SHOW ONLY IF APDW2 = 10]**

99. Don't know

BASE: ALL ADULTS IN SCOTLAND 16+ WHO COULD SHIFT NO MORE THAN 25% OF DISHWASHER USAGE TO OFF PEAK TIMES
FILTER: APDW3=5-6
APDW4. Which, if any, of the following reasons limits your household's ability to switch some or all of your dishwasher use to 'off peak' times?

Please select all that apply
MULTICODE 1-13, RANDOMISE 1-12

1. Too noisy to run during the night
2. Would need a smart meter to take advantage of 'off peak' energy costs / can't install smart meter **[SHOW IF QSM = NOT 1]**
3. Would need additional / new appliances / technology to benefit (e.g. smart appliances, appliances with delay functions, timers)
4. Would not fit with my household's lifestyle / work patterns
5. Don't know enough about this / not heard of this before
6. Don't know how much we would save
7. No guarantee we would save money
8. Heard negative things about this from family / friends
9. Heard negative things about this in the media
10. Not my / our choice – don't control when it runs
11. Wouldn't save enough to make it worthwhile
12. Safety concerns
13. Another reason
14. None of these
98. Don't know

Electric vehicle questions

BASE: ALL ADULTS IN SCOTLAND 16+ WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS
FILTER: QPOW=1-3 AND QRESP=1,2 OR 4
SHOW SCREEN

INT_EV.

Next we have some questions about fully electric or plug-in hybrid electric vehicles (cars or vans that you plug in to charge).

[IF QAPP = 1] You mentioned previously that your household has use of (an) electric vehicle(s).

BASE: ALL ADULTS IN SCOTLAND 16+ WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS AND DOES NOT HAVE A PLUG IN VEHICLE
FILTER: QPOW = 1-3 AND QRESP = 1, 2 or 4 AND QAPP NOT 1

EV1. How likely or unlikely would your household be to **[IF QCARS = CODE 1, 98 or 99 SHOW <**get a fully electric or a 'plug-in hybrid' car or van**>; IF QCARS = CODE 2 SHOW <**change your car or van to a fully electric or 'plug-in hybrid' one**>; IF QCARS = CODES 3-5 SHOW <** change your main car or van to a fully electric or 'plug-in hybrid' one**>]** (e.g. a vehicle that you plug in and charge), in the next two years?

HOVER OVER FOR 'plug-in hybrid'**: '**A Plug-in Hybrid Electric Vehicle (PHEV) has both a battery you plug in to charge at home and a petrol/diesel engine**'**

This could be a leased or company car or van.

SINGLE CODE, FORWARD/REVERSE CODES 1-5

1. Very likely
2. Fairly likely
3. Neither likely or unlikely
4. Fairly unlikely
5. Very unlikely
6. Not applicable – not my choice

98: Don't know

BASE: ALL ADULTS IN SCOTLAND 16+ WHO ARE LIKELY OR UNLIKELY TO GET AN EV IN THE NEXT TWO YEARS
FILTER: EV1=1-5

EV2. **IF CODE 3-5 AT EV1: INSERT TEXT** - For which, if any, of the below reasons is your household unlikely to get a fully electric or a plug-in hybrid car or van in the next two years?

IF CODE 1-2 AT EV1: INSERT TEXT - For which, if any, of the below reasons has your household not got a fully electric or a plug-in hybrid car or van yet?

Please select all that apply

MULTICODE 1 – 16, RANDOMISE 1-15

1. The purchase price of the vehicle is too high
2. The costs of running it are too high (e.g. cost of charging, tax, maintenance etc.)
3. The range is not far enough
4. Concerns about reliability
5. Takes too long to charge
6. Prefer a petrol / diesel-powered car / self-charging hybrid / plug-in hybrid **[SHOW ONLY IF EV1 = 3-5]**
7. Nowhere to charge near home / lack of public charge points
8. Unable to get a charging point at home (e.g. no driveway, landlord / freeholder won't allow)
9. Using and charging an electric vehicle would not fit with my household's **[IF EV1 = 1-2 SHOW <**current**>]** lifestyle / work patterns
10. Don't know enough about them
11. There are no / insufficient grants or financial support schemes available to help buy / lease one
12. Heard negative things from family / friends **[SHOW ONLY IF EV1 = 3-5]**
13. Heard negative things in the media **[SHOW ONLY IF EV1 = 3-5]**
14. Not looking to get a car / van at all **[SHOW ONLY IF EV1 = 3-5]**
15. Have not needed to get a car / van yet **[SHOW ONLY IF EV1 = 1-2]**
16. Another reason
17. No particular reason

98. Don't know

BASE: ALL ADULTS IN SCOTLAND 16+ WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS AND DOES NOT HAVE AN EV
FILTER: QAPP = NOT 1

EV3. Do you think each of these statements is true or false?

PROGRESSIVE GRID
ROWS

1. If my household had a fully electric or a plug in hybrid car or van, we would be able to charge it at home (such as in our garage or on our driveway)
2. If my household had a fully electric or a plug in hybrid car or van and a place to charge it, we would be able to charge the car at off peak times (10pm-8am or 11am-4pm)

COLUMNS, SINGLE CODE, FORWARD/REVERSE CODES 1-4

1. Definitely true
2. Probably true
3. Probably false
4. Definitely false

98. Don't know

BASE: ALL ADULTS IN SCOTLAND 16+ WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS AND HAS AN EV
FILTER: QAPP = 1

EV3_S3. Do you think this statement is true or false?

Electric vehicles can be set to charge at off-peak times (10pm-8am or 11am-4pm) to make them cheaper to run

SINGLE CODE, FORWARD/REVERSE CODES 1-4

1. Definitely true
2. Probably true
3. Probably false
4. Definitely false

98. Don't know

Heat pump questions

BASE: ALL ADULTS IN SCOTLAND 16+ WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS AND DOES NOT OWN A HEAT PUMP
FILTER=QPOW=1-3 AND QRESP=1,2 OR 4 AND QHEAT1=NOT 5
SHOW SCREEN

Next, we have some questions about heat pumps. These are a specific type of electric home heating system which extracts heat from the outside environment (such as the air or ground).

BASE: ALL ADULTS IN SCOTLAND 16+ WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS AND DOES NOT OWN A HEAT PUMP
FILTER=QPOW=1-3 AND QRESP=1,2 OR 4 AND QHEAT1=NOT 5

HP1. How likely or unlikely , would your household be to change your central heating system to a heat pump in the next two years?

SINGLE CODE, FORWARD/REVERSE CODES 1-5

1. Very likely
2. Fairly likely
3. Neither likely or unlikely
4. Fairly unlikely
5. Very unlikely
6. Not applicable – not my choice

98: Don't know

BASE: ALL ADULTS IN SCOTLAND 16+ WHO ARE LIKELY/UNLIKELY TO GET A HEAT PUMP IN THE NEXT TWO YEARS
FILTER: HP1=1-5

HP2.IF CODE 3-5 AT HP1: SHOW For which, if any, of the below reasons is your household unlikely to get a heat pump in the next two years?

IF CODE 1-2 AT HP1: SHOW For which, if any, of the below reasons has your household not got a heat pump yet?

Please select all that apply

MULTICODE 1-18, AND RANDOMISE CODES 1-17

1. The purchase price or running cost is too high
2. Concerns about reliability or safety
3. Too noisy
4. Will not heat our home to a suitable temperature
5. Would need a smart meter to be able to benefit from off peak energy costs / can't install smart meter **[SHOW ONLY IF QSM =2-4]**
6. Our **[IF HP1 = 1-2 SHOW<**current**>]** home is unsuitable for a heat pump (e.g. live in flat, property layout, no outside space)
7. Hassle / disruption of installing a heat pump
8. Would need to make additional home improvements (e.g. install insulation, hot water tank, battery storage, bigger radiators, different piping etc.)
9. Would not fit with my household's **[IF HP1 = 1-2 SHOW<**current**>]** lifestyle / work patterns
10. Don't know enough about them / not heard of them before
11. There are no / insufficient grants or financial support schemes available to help buy one
12. Heard negative things from family / friends **[SHOW ONLY IF HP1 = 3-5]**
13. Heard negative things in the media **[SHOW ONLY IF HP1 = 3-5]**
14. Not my / our choice – landlord or freeholder would decide
15. Prefer current / alternative heating system e.g. gas boiler, biomass boiler etc. **[SHOW ONLY IF HP1 = 3-5]**
16. Not needed/wanted
17. Not my choice (e.g. renting)
18. Another reason
19. No particular reason / haven't thought about it before

98. Don't know

Time of Use Tariff questions

BASE: ALL ADULTS IN SCOTLAND 16+ WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS AND DOES NOT HAVE A TOU TARIFF
FILTER: QPOW = 1-3 AND QRESP = 1, 2 OR 4 AND [QTAR1 = 2 OR QTAR2 = 1 OR 5]
SHOW SCREEN

INT_TOU. The next few questions are about Time of Use tariffs. On these energy tariffs, energy is cheaper at specific times of the day / night or the same days of the week (e.g. over the weekend). These are referred to as 'off peak' times.

Examples include Economy 7, Economy 10, British Gas Peak Save or E.on Next Smart Saver.

BASE: ALL ADULTS IN SCOTLAND 16+ WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS AND DOES NOT HAVE A TOU TARIFF
FILTER: QPOW = 1-3 AND QRESP = 1, 2 OR 4 AND [QTAR1 = 2 OR QTAR2 = 1 OR 5]

TOU1. How likely or unlikely is your household to change your energy tariff to a Time of Use tariff in the next two years?

SINGLE CODE, FORWARD/REVERSE CODES 1-5

1. Very likely
2. Fairly likely
3. Neither likely or unlikely
4. Fairly unlikely
5. Very unlikely
6. Not applicable – not my choice

98: Don't know

BASE: ALL ADULTS IN SCOTLAND 16+ WHO ARE LIKELY OR UNLIKELY TO SWITCH TO A TOU

FILTER: TOU1=1-5

TOU2. **[IF TOU1=CODE 3-5 SHOW** For which, if any, of the below reasons is your household unlikely to switch to a Time of Use tariff in the next two years?
[IF TOU1= CODE 1-2 SHOW For which, if any, of the below reasons has your household not switched to a Time of Use tariff yet?
Please select all that apply

MULTICODE 1-19, RANDOMISE CODES 1-18

1. Would increase energy bills
2. Don't trust **[IF TOU1 = 1-2 SHOW <**current**>]** energy supplier to charge less when energy price drops / charge a fair price
3. Too difficult to change tariff
4. Can't change behaviour / run appliances / charge vehicle overnight to benefit from it **[SHOW ONLY IF TOU1 = 3-5]**
5. Would need a smart meter to be able to take advantage of off-peak energy costs / can't install smart meter **[SHOW ONLY IF QSM=2, 3,4 OR 99]**
6. Running appliances overnight would be too noisy
7. Would need additional appliances / technology to benefit from it (e.g. smart appliances, appliances with delay functions, timers)
8. Would need to change when I / we use energy at home **[SHOW ONLY IF TOU1 = 3-5]**
9. Would not fit with my household's **[IF TOU1 = 1-2 SHOW <**current**>]** lifestyle / work patterns
10. Don't know enough about this / not heard of this before **[SHOW ONLY IF TOU1 = 3-5]**
11. Don't know how much we would save
12. No guarantee we will save money
13. Heard negative things from family / friends
14. Heard negative things in the media
15. Not my / our choice – don't choose my household's energy tariff **[SHOW ONLY IF TOU1 = 3-5]**
16. Wouldn't save enough to make it worthwhile **[SHOW ONLY IF TOU1 = 3-5]**
17. Have specific needs e.g. medical appliances need to run all the time **[SHOW ONLY IF TOU1 = 3-5]**
18. Energy supplier doesn't offer it
19. Another reason
20. No particular reason / haven't thought about it before

98. Don't know

Free energy events

BASE: ALL ADULTS IN SCOTLAND 16+ WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS
FILTER: QPOW=1-3 AND QRESP=1,2 OR 4
SHOW SCREEN

Some energy suppliers and services provide specific energy saving offers. The name of the offer varies for different suppliers. These are sometimes called 'Peak Save', 'Saving sessions', 'Power Saver', 'Power Hours', 'Power Payback' or 'Demand Flexibility Service'.

This is when energy suppliers notify their customers of specific, one-off times when they can change how they use energy in return for a reward (such as credit against their energy bill, points within a scheme or prizes).

For example, this might include notifying customers of times when energy demand is high and encouraging them to reduce their energy use for this period.

BASE: ALL ADULTS IN SCOTLAND 16+ WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS
FILTER: QPOW=1-3 AND QRESP=1,2 OR 4

QEE1: Before today, how much did you know about these energy saving offers?

SINGLE CODE, FORWARD/REVERSE CODES 1-5

1. A great deal
2. A fair amount
3. Just a little
4. Heard of but know nothing about
5. Never heard of

98. Don't know

BASE: ALL ADULTS IN SCOTLAND 16+ WHO KNOW AT LEAST A LITTLE ABOUT ENERGY SAVING EVENTS
FILTER: QEE1=1-3

QEE2. Has your household ever participated in an energy saving offer like the ones described before?
SINGLE CODE
1. Yes
2. No
98. Don't know

BASE: ALL ADULTS IN SCOTLAND 16+ WHO HAVE PARTICIPATED IN AN ENERGY SAVING OFFER EVENT
FILTER: QEE2=1

QEE3. In the last 12 months, how often, if at all, has your household participated in an energy saving offer event?
SINGLE CODE, FORWARD/REVERSE CODES 1-7
1. About once a week
2. About once a fortnight
3. About once a month
4. About once every three months
5. About once every six months
6. About once a year
7. Never
98. Don't know / can't remember

BASE: ALL ADULTS IN SCOTLAND 16+ WHO HAVE NOT PARTICIPATED IN AN ENERGY SAVING OFFER EVENT
FILTER: QEE2=2

QEE4. What are the main reasons why your household has not participated in an energy saving offer event before?
Please select up to three.

MULTI CODE 1-12,MAX UP TO 3. RANDOMISE CODES 1-11

1. Don't know enough about this / not heard of this before
2. Energy supplier doesn't offer it
3. Would not fit with my household's lifestyle / work patterns
4. Don't know how much we would save
5. No guarantee we will save money
6. Wouldn't save enough to make it worthwhile
7. Heard negative things from family / friends
8. Heard negative things in the media
9. Too much hassle to sign up for these offers
10. Not my / our choice
11. Have specific needs (e.g. medical appliances need to run all the time, etc.)
12. Another reason
13. No particular reason / haven't thought about it before
98. Don't know

BASE: ALL ADULTS IN SCOTLAND 16+ WHO HAVE PARTICIPATED IN AN ENERGY SAVING OFFER EVENT
FILTER: QEE2=1

QEE5. Thinking about the last time you participated in an energy saving offer event, which of the following did your household do?
Please select all that apply.

MULTICODE 1-11, RANDOMISE CODES 1-10, KEEP TOGETHER CODES 1-2, 3-4, 5-6, 7-8, 9-10
1. Used our washing machine / combined washer-dryer more **[SHOW ONLY IF QAPP = 4]**
2. Used our washing machine/ combined washer-dryer less or not at all **[SHOW ONLY IF QAPP = 4]**
3. Used our tumble dryer more **[SHOW ONLY IF QAPP = 5]**
4. Used our tumble dryer less or not at all **[SHOW ONLY IF QAPP = 5]**
5. Used our dishwasher more **[SHOW ONLY IF QAPP = 6]**
6. Used our dishwasher less or not at all **[SHOW ONLY IF QAPP = 6]**

7. Used our oven more
8. Used our oven less or not at all
9. Turned our heating down / off
10. Turned our heating up
11. Something else (please specify) **[INSERT TEXT BOX]**
12. None of these
98. Don't know

BASE: ALL ADULTS IN SCOTLAND 16+ WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS
FILTER: QPOW=1-3 AND QRESP=1,2 OR 4
NEW SCREEN

In the next few years, new smart technologies and services could help consumers to reduce energy bills and carbon emissions by shifting energy use to off-peak times.

With your agreement, some home appliances could be linked to a company like your energy supplier in the next few years. The company would remotely manage when these appliances run, within the conditions you set. Allowing them to do this automatically could lower your energy costs and help reduce carbon emissions by shifting your energy use to off-peak times.

FREEZE CONTINUE BUTTON FOR 10 SECONDS

BASE: ALL ADULTS IN SCOTLAND 16+ WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS
FILTER: QPOW=1-3 AND QRESP=1,2 OR 4
NEW SCREEN
FREEZE CONTINUE BUTTON FOR 10 SECONDS

For example, this could include:

- Heating: The supplier could manage heating times and/or adjust the thermostat by one or two degrees. For example they could turn the customer's heating on when the cost of energy falls. The customer could still control it manually through their heating controls.
- Electric Vehicles: If a customer has an electric vehicle, the supplier could manage charging times to when energy is cheaper. The customer could still charge manually or set it to charge through their own timer or app.
- Appliances: Smart features on appliances like washing machines and dishwashers could automatically start a washing cycle when energy is cheaper.

This could reduce the customer's energy bills by helping them to use energy at times when it is cheaper, and could also reduce the carbon emissions produced by the UK energy system.

BASE: ALL ADULTS IN SCOTLAND 16+ WHO HAVE MAINS GAS OR ELECTRICITY SUPPLY AND ARE SOLELY/JOINTLY RESPONSIBLE FOR PAYING BILLS OR LANDLORD PAYS
FILTER: QPOW=1-3 AND QRESP=1,2 OR 4

QFLEX: How comfortable, or uncomfortable, would you feel about a company managing each of the following on your household's behalf within the conditions you set?

PROGRESSIVE GRID
ROWS

1. When your home heating switches on and off

2:When your electric vehicle or plug in hybrid car or van charges **[IF QAPP = 1]**

3When your washing machine or combined washer/dryer starts a cycle **[IF QAPP=4]**

4.When your dishwasher starts a cycle **[IF QAPP=6]**

COLUMN. SINGLE CODE, FORWARD/REVERSE CODES 1-5

1. Very comfortable
2. Fairly comfortable
3. Neither comfortable nor uncomfortable
4. Fairly uncomfortable
5. Very uncomfortable
98. Don't know

Our standards and accreditations

Ipsos' standards and accreditations provide our clients with the peace of mind that they can always depend on us to deliver reliable, sustainable findings. Our focus on quality and continuous improvement means we have embedded a "right first time" approach throughout our organisation.

ISO 20252

This is the international specific standard for market, opinion and social research, including insights and data analytics. Ipsos UK was the first company in the world to gain this accreditation.

Market Research Society (MRS) Company Partnership

By being an MRS Company Partner, Ipsos UK endorse and support the core MRS brand values of professionalism, research excellence and business effectiveness, and commit to comply with the MRS Code of Conduct throughout the organisation & we were the first company to sign our organisation up to the requirements & self-regulation of the MRS Code; more than 350 companies have followed our lead.

ISO 9001

International general company standard with a focus on continual improvement through quality management systems. In 1994 we became one of the early adopters of the ISO 9001 business standard.

ISO 27001

International standard for information security designed to ensure the selection of adequate and proportionate security controls. Ipsos UK was the first research company in the UK to be awarded this in August 2008.

The UK General Data Protection Regulation (UK GDPR) and the UK Data Protection Act 2018 (DPA)

Ipsos UK is required to comply with the UK General Data Protection Regulation (GDPR) and the UK Data Protection Act (DPA). These cover the processing of personal data and the protection of privacy.

HMG Cyber Essentials

Cyber Essentials defines a set of controls which, when properly implemented, provide organisations with basic protection from the most prevalent forms of threat coming from the internet. This is a government-backed, key deliverable of the UK's National Cyber Security Programme. Ipsos UK was assessed and validated for certification in 2016.

Fair Data

Ipsos UK is signed up as a "Fair Data" company by agreeing to adhere to twelve core principles. The principles support and complement other standards such as ISOs, and the requirements of data protection legislation.

For more information

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About Ipsos Public Affairs

Ipsos Public Affairs works closely with national governments, local public services and the not-for-profit sector. Its c.200 research staff focus on public service and policy issues. Each has expertise in a particular part of the public sector, ensuring we have a detailed understanding of specific sectors and policy challenges. Combined with our methods and communications expertise, this helps ensure that our research makes a difference for decision makers and communities.