

Smart meters and energy usage: a survey of energy behaviour before and after upgrading to a smart meter

APRIL 2017

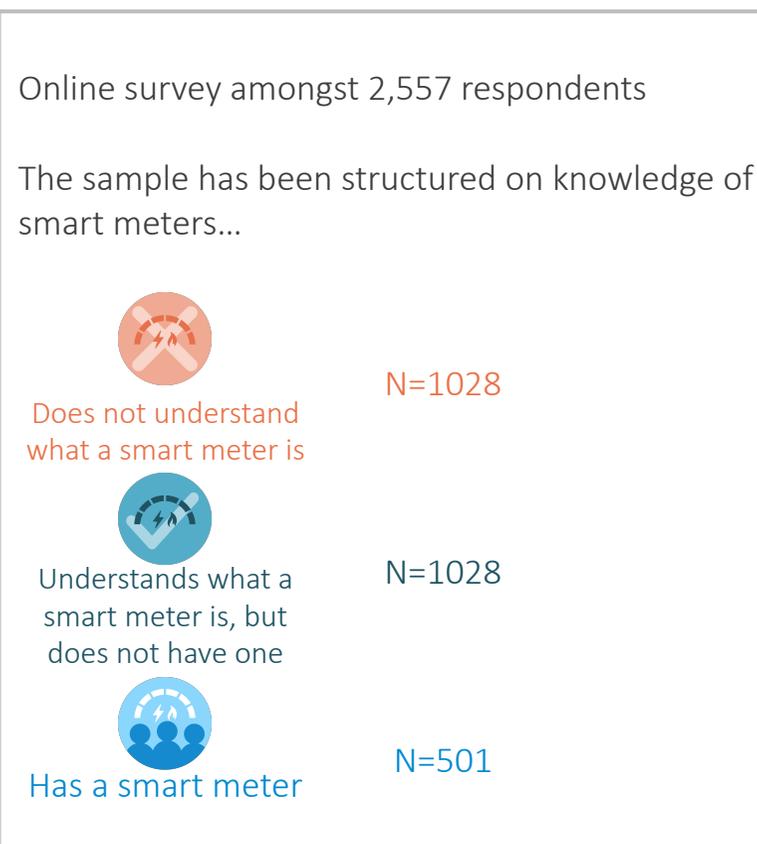
Populus



Methodology of the research and sample composition

Smart Energy GB asked Populus to conduct this research to better understand if and how smart meters and understanding of what a smart meter is change energy usage behaviour.

1. Populus asked 2,557 people in November 2016 about their understanding of smart meters and (for those who already have a smart meter) changes in their energy usage behaviour since getting their smart meter.
2. The research identifies the reported actions of those who have a smart meter as to how they have changed their behaviour and used their smart meter to reduce their energy consumption.
3. It also identifies the reported actions of people who don't yet have a smart meter but understand in detail what one is, and those who do not understand what a smart meter is.
4. 'Understanding' is defined as knowing three key facts about smart meters: that they are fitted by energy suppliers, that they bring an end to estimated bills, and that they show the user what they're spending in pounds and pence.



Executive summary

- People with smart meters have greater insight into how much energy they use. They are more likely than people who don't have a smart meter to say they understand how much energy they use and how to save energy.
- People who understand in detail what a smart meter is but have not yet had one installed in their home also demonstrate greater insight into the energy they use, and are taking more steps to use less energy, than people who don't understand in detail what a smart meter is.
- Those who have had their smart meter for longer report greater reductions in energy use, take more steps to save energy, and are more habitual in their day-to-day energy saving actions.

Energy saving attitudes and behaviours

We asked about 21 different energy saving activities...



Change the way you do things around the house

- Turn off lights in an empty room
- Turn heating down or off when it is not required
- Make an effort not to overfill the kettle
- Make an effort not to leave electrical items in standby mode
- Change the time at which you use appliances



Make changes to your home

- Fit energy efficient lighting
- Fit insulation
- Fit double or triple glazed windows
- Fit an energy efficient boiler or heating system
- Fit radiator reflectors
- Fit an energy generating device
- Have a smart thermostat installed



Look into it

- Monitor more closely how much energy is being used
- Look into appliances that are more energy efficient
- Look into ways to make your home more energy efficient
- Seek advice from energy supplier
- Seek advice from a consumer advisory body



Talk about it

- Encourage others in the household to use less energy
- Discuss ways of saving energy with others

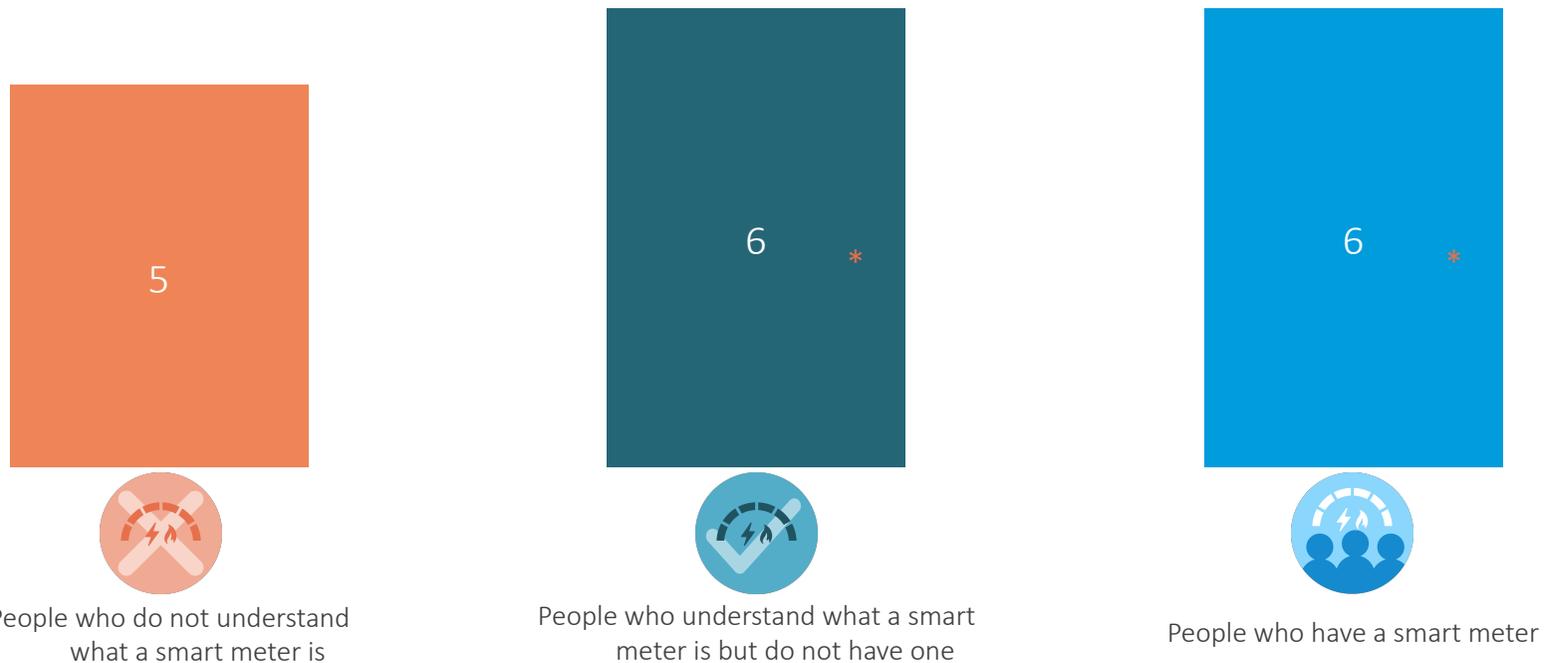


Purchase an energy efficient product

- Purchase a large appliance which is more energy efficient
- Purchase a small appliance which is more energy efficient

All groups claim to be taking steps to use less energy. Those who have detailed understanding of smart meters or who already have a smart meter are taking more steps, on average, to save energy

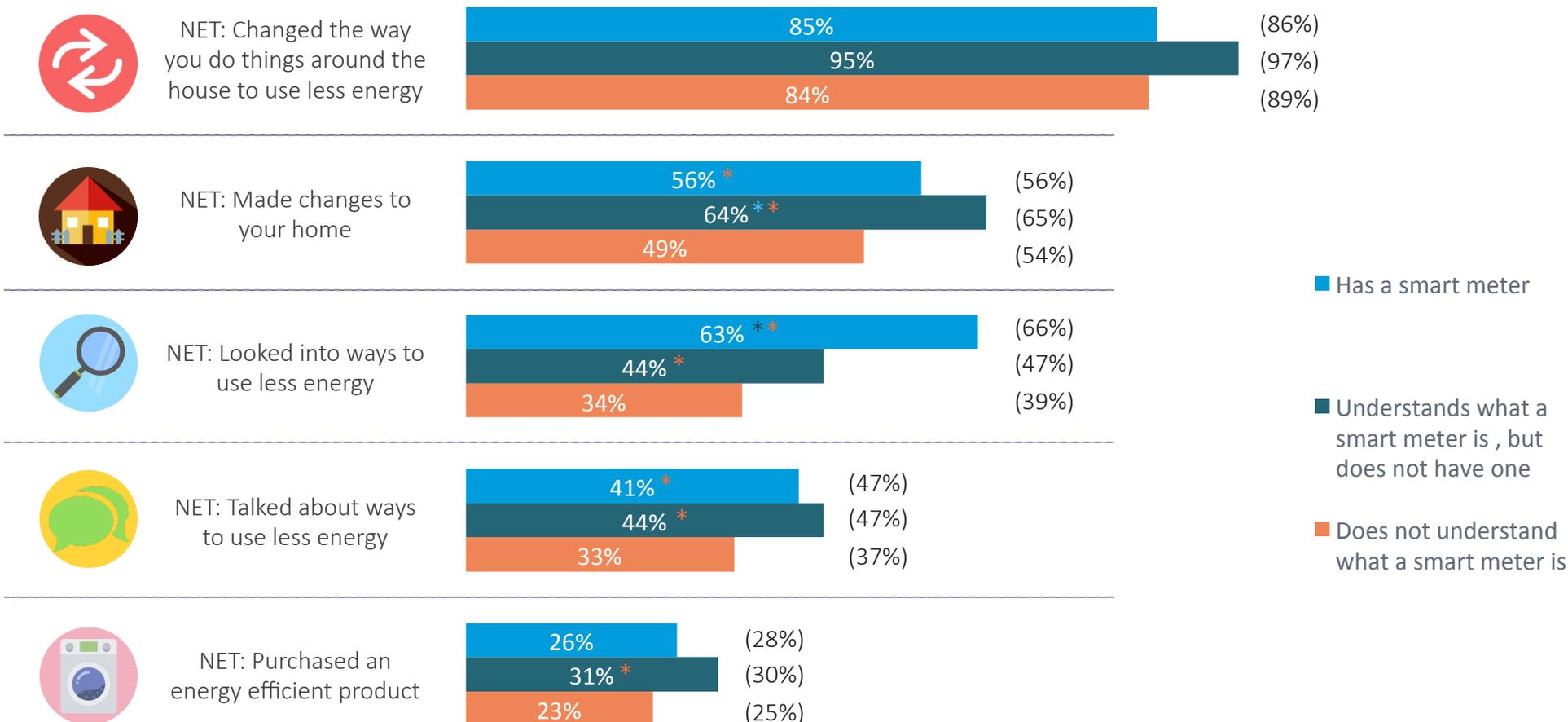
Claimed existing behaviours (average number of activities done) - split across three groups: Those without understanding of what a smart meter is, those with understanding, and those who have a smart meter



*Denotes significant difference @ 95% (colour of asterisk) denotes which group is being compared)

Those who have or understand what a smart meter is are typically doing a little bit more to try and use less energy than those who don't understand what a smart meter is

Claimed existing behaviours (NETs)



*Denotes significant difference @ 95% (colour of asterisk) denotes which group is being compared)

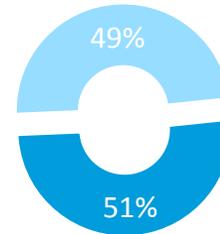
Monitoring energy more closely with a smart meter is a catalyst for increasing energy saving activities

Existing activities – [Has a smart meter](#)

Average number of activities for those who HAVEN'T monitored more closely than before:

4

Whether monitoring more closely than before:



- Doesn't monitor more closely than before
- Monitors more closely than before

Average number of activities for those who HAVE monitored more closely than before:

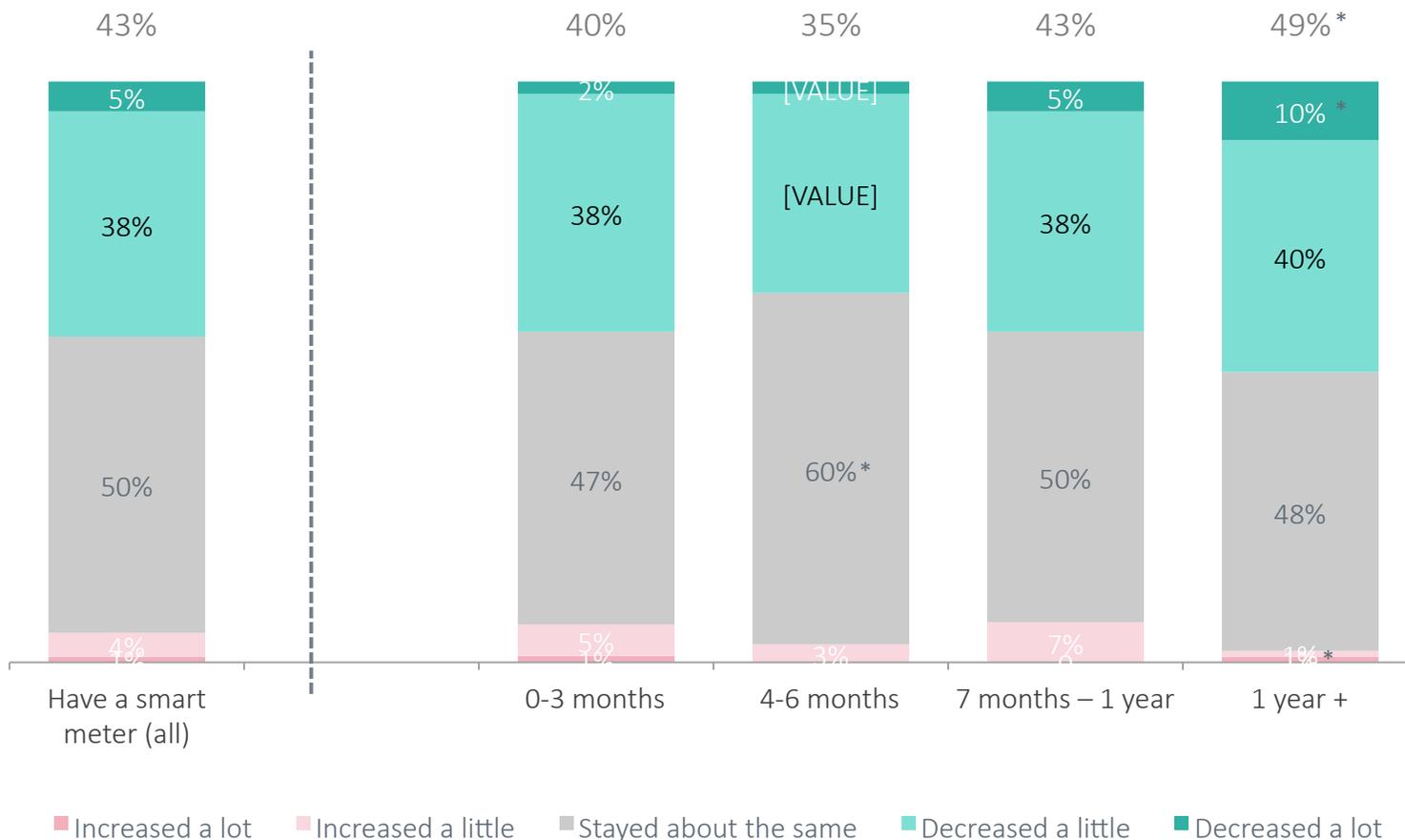
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Impact of length of time with a smart meter

Those who have had their smart meter for longer report greater energy use reduction

Reported change in energy usage since getting a smart meter

NET T2B:
Decreased



*Denotes significant difference @ 95% versus total with a smart meter

Those who have had a smart meter for a longer time become even more likely to have taken action to use less energy

Existing activities since getting a smart meter



Turned heating down or off when it is not required



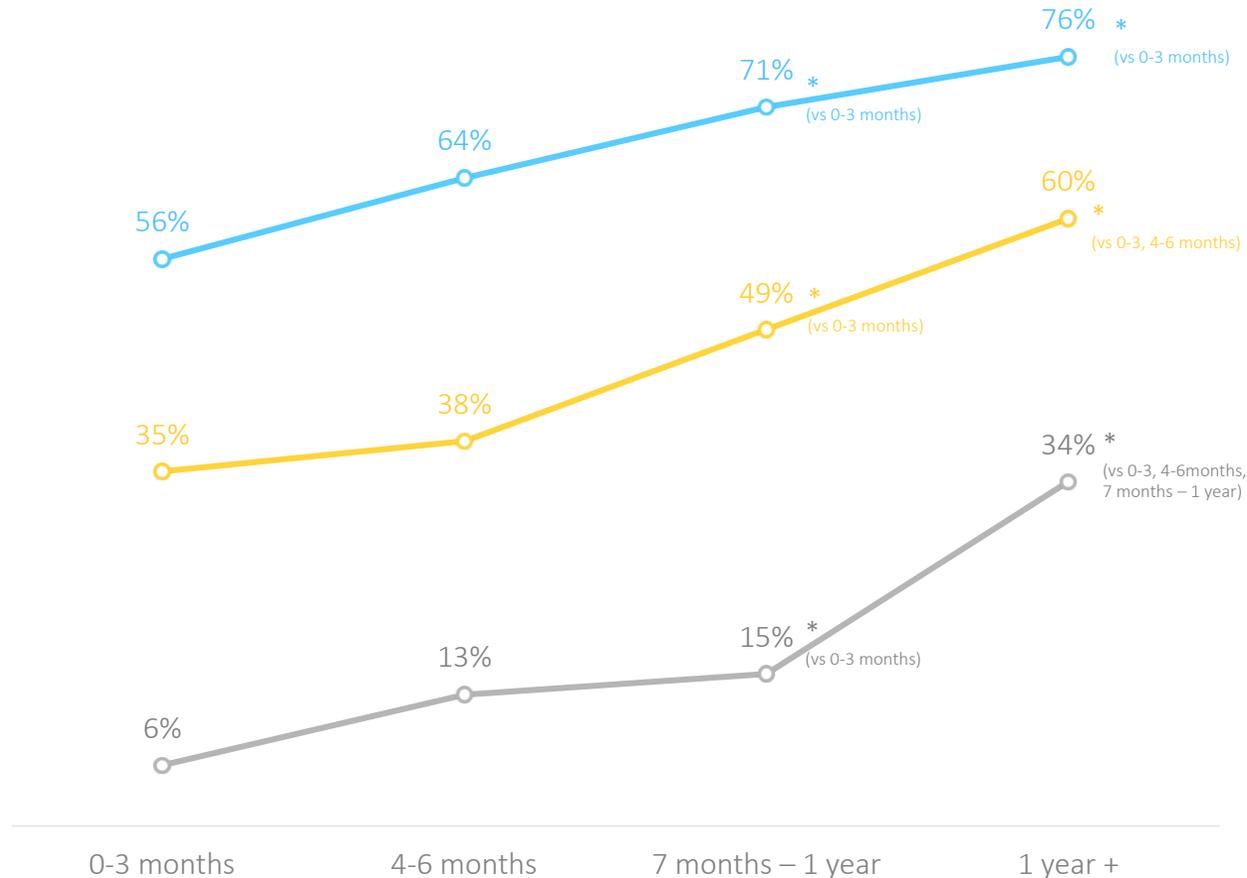
Fitted energy efficient lighting (e.g. LEDs)



Purchased a large appliance which is more energy efficient

This pattern is consistent for similar simple day-to-day energy saving activities

Denotes significant difference @ 95% between groups (parentheses indicates which group is being compared)



Not only have people who've had their smart meter longer taken more actions to use less energy, but they are more habitual in their day-to-day energy saving actions

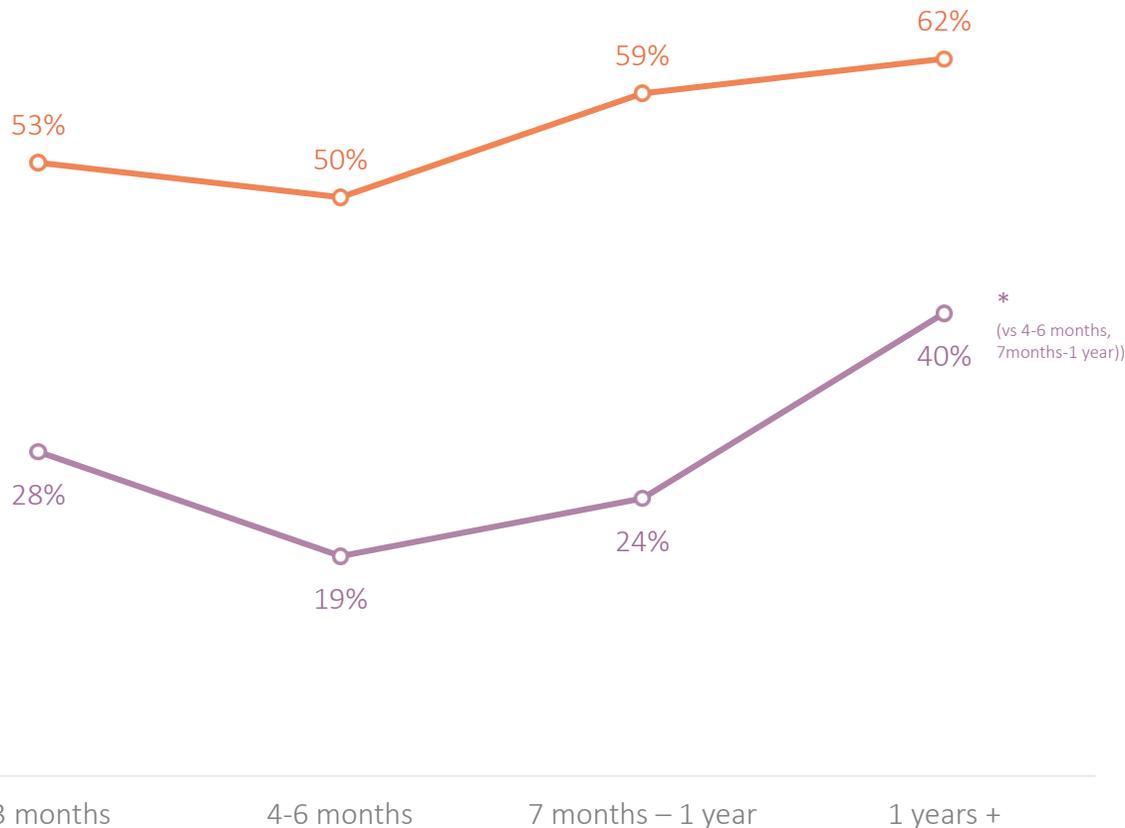
Activities % always doing



Turn off lights in an empty room



Make an effort not to leave electrical items on standby

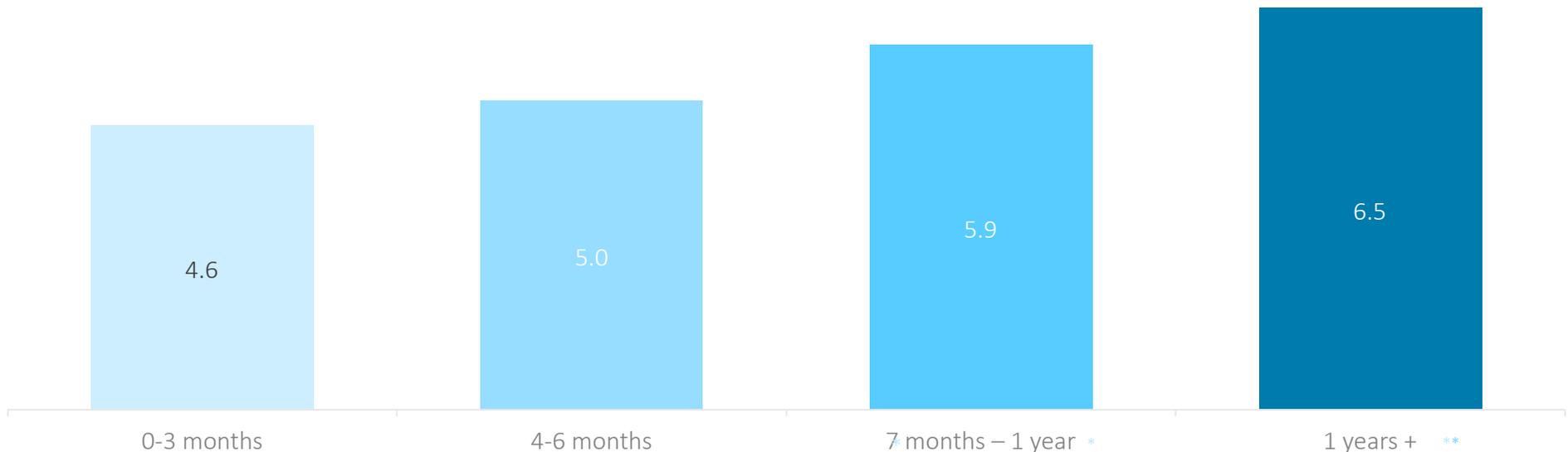


This pattern is consistent across simple day-to-day energy saving activities

Denotes significant difference @ 95% between groups (parentheses indicates which group is being compared)

The average number of energy saving activities also increases for those who have had a smart meter for longer

Mean number of activities since getting a smart meter

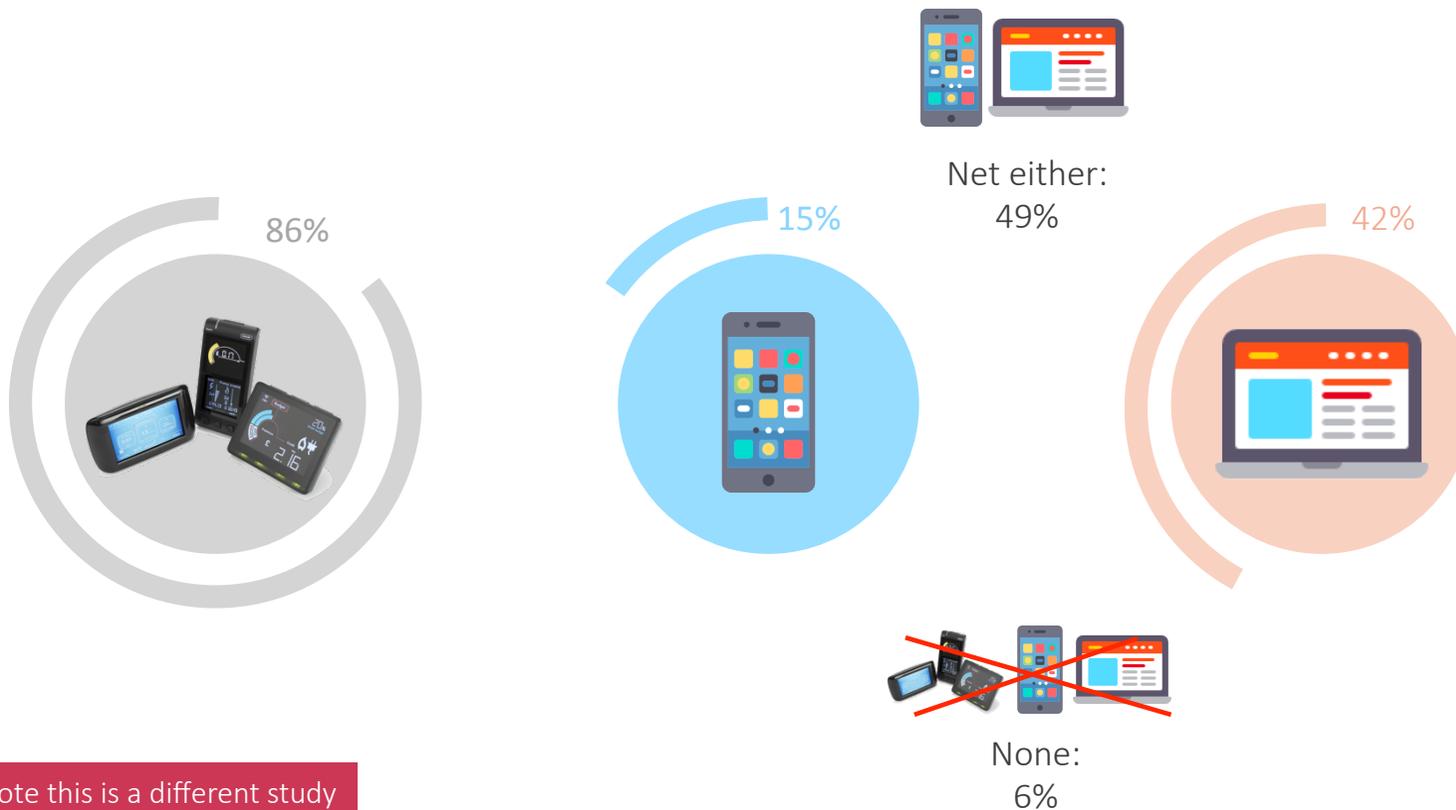


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IHD, apps and online accounts

A large majority of smart meter users have an IHD, with half having access to either an online account or app

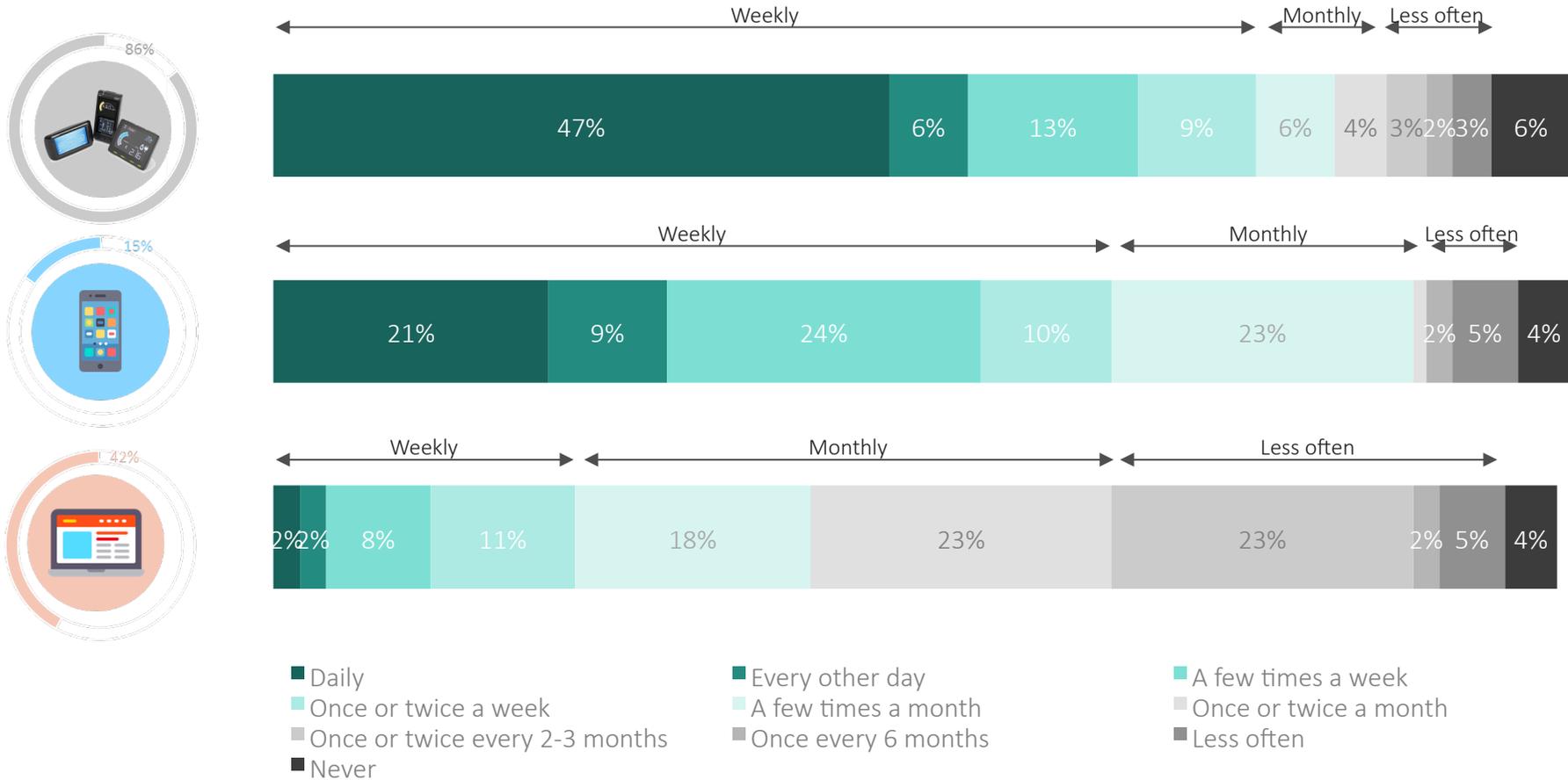
IHD, app and online account access



Please note this is a different study to Smart Energy Outlook

In-home displays are checked at a much greater frequency than both the app and online accounts

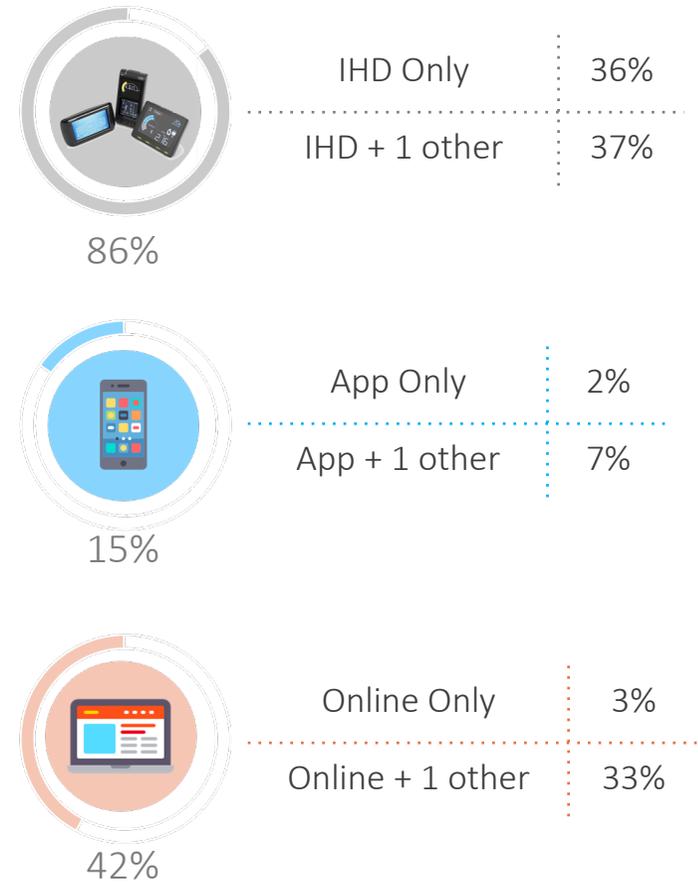
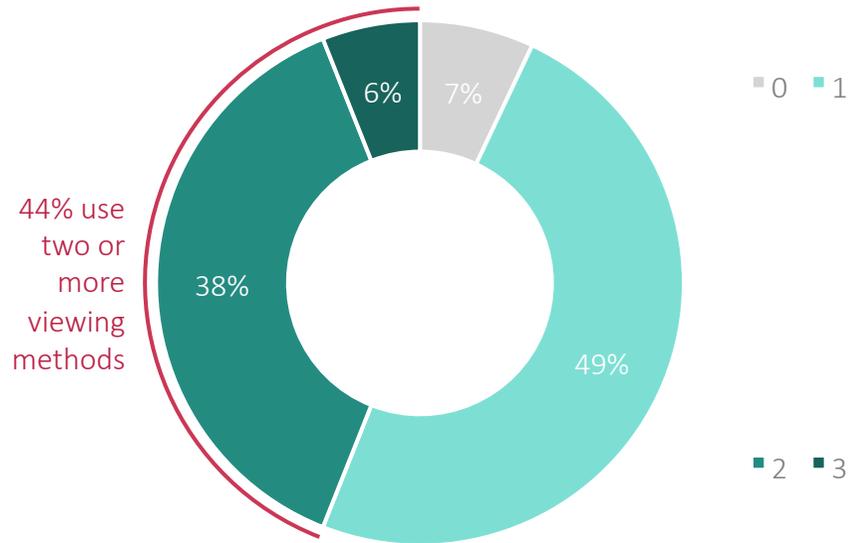
IHD, app and online account usage



Smart meter users will often have more than one method to look at their energy usage data

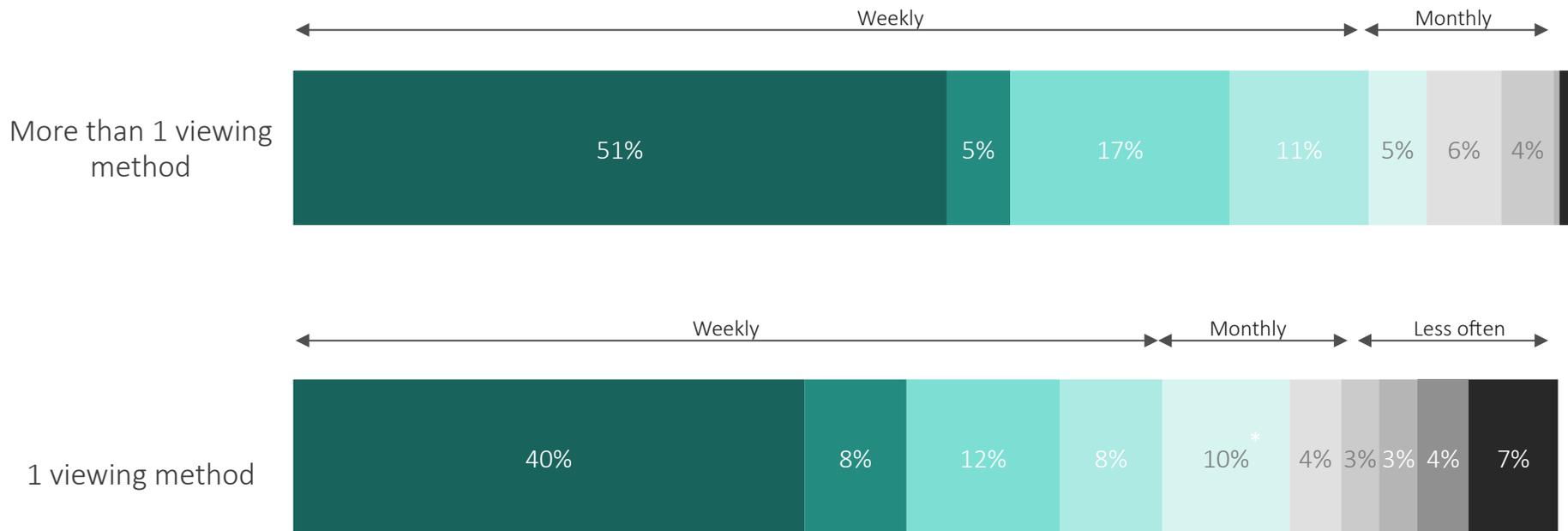
IHD, app and online account access

Number of viewing methods owned



Having multiple viewing methods drives an increased level of checking usage

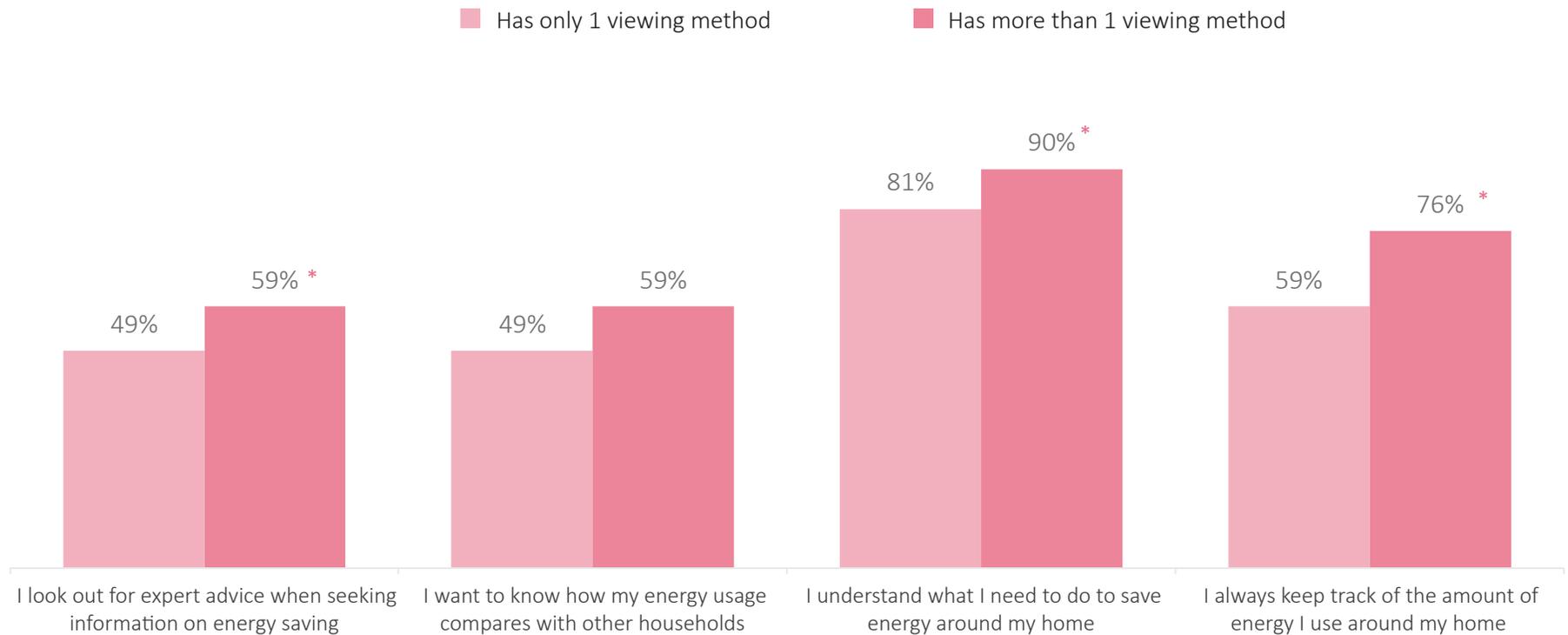
Frequency of checking any smart meter viewing method



- Daily
- Every other day
- A few times a week
- Once or twice a week
- A few times a month
- Once or twice a month
- Once or twice every 2-3 months
- Once every 6 months
- Less often
- Never

Those who have multiple viewing methods are more engaged with saving energy. They are more likely to understand their own energy use and, importantly, how to reduce it

NET agreement with statements



* Denotes significant difference @ 95% between groups

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