

# Sustainable Aviation Fuel

## Public Perception Report

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### Overview & methodology

This report analyses and summarises the findings of research carried out in October 2023 among over 2000 UK adults to gauge their knowledge and perception of Sustainable Aviation Fuel (SAF), on behalf of Innovate UK Business Connect to support the Jet Zero Council.

### Flight frequency by demographic

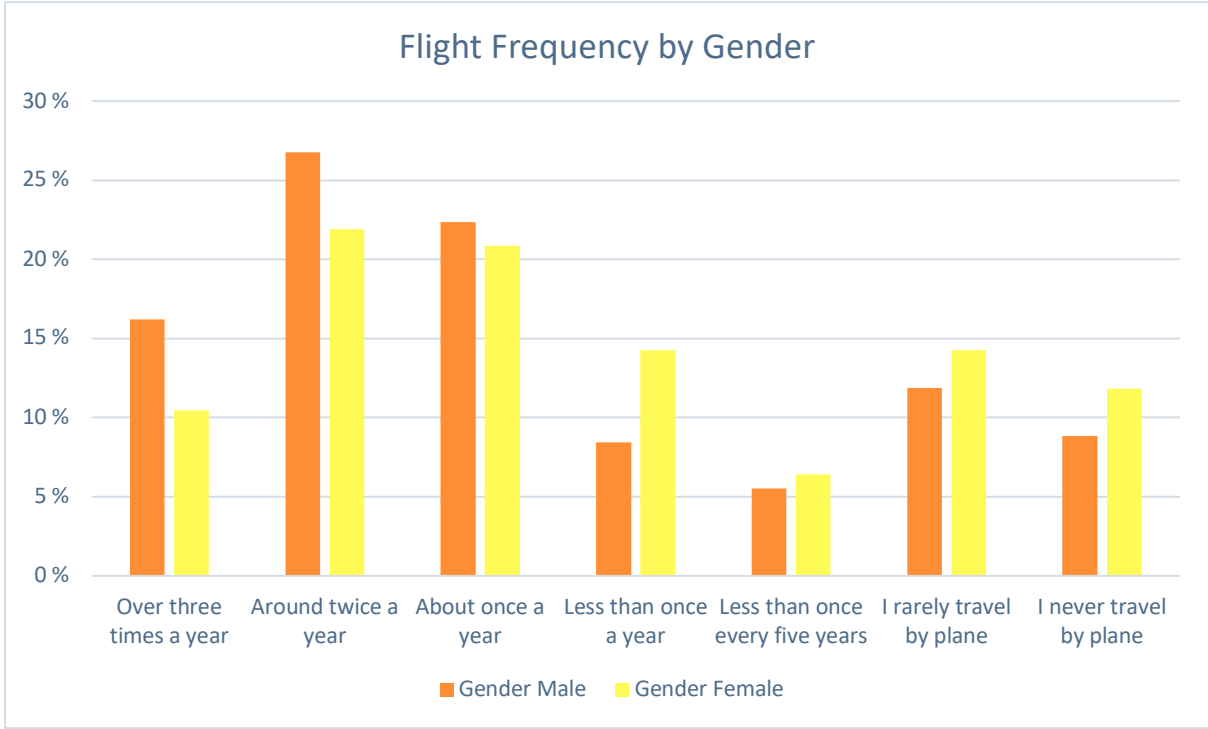
The aim of the research was not to explore flight frequency and the reasons behind it. However, understanding how much the people in our study use air travel, and whether this is impacted by their concerns for the environment, clearly provides an important context, when gauging the ramifications of their knowledge of and attitude towards Sustainable Aviation Fuel.

The majority of those studied, (59%), fly at least once per year. Though a significant proportion (23%) rarely or never travel by plane.

Age has an impact on flight frequency. Those aged 25-34 are significantly more likely to be frequent fliers; 48% fly at least twice a year and 20% over three times a year. In contrast, only 29% of those aged 64+ fly at least twice a year and just 9% more than three times.

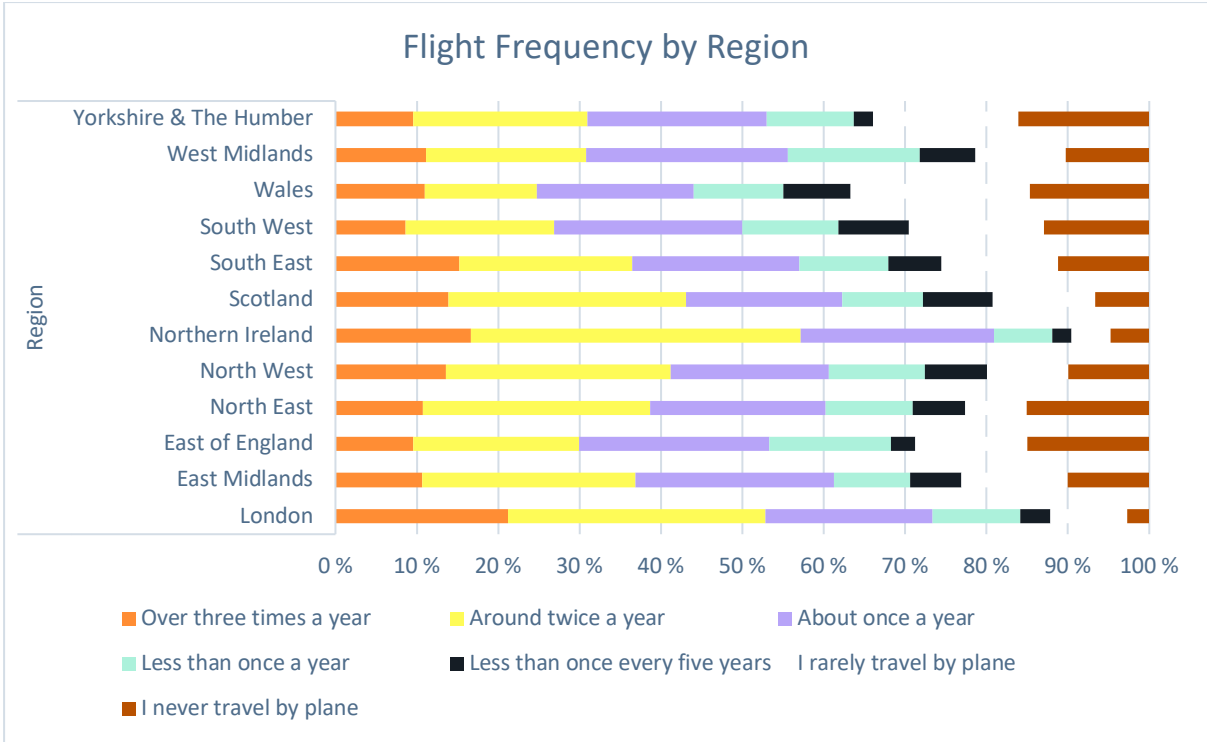
### Flight frequency by gender

There are also some gender variations. The women questioned are less likely to travel by plane frequently, 32% fly at least twice a year, compared to 43% of men. They're also slightly more likely to rarely or never fly (26% vs 21%).



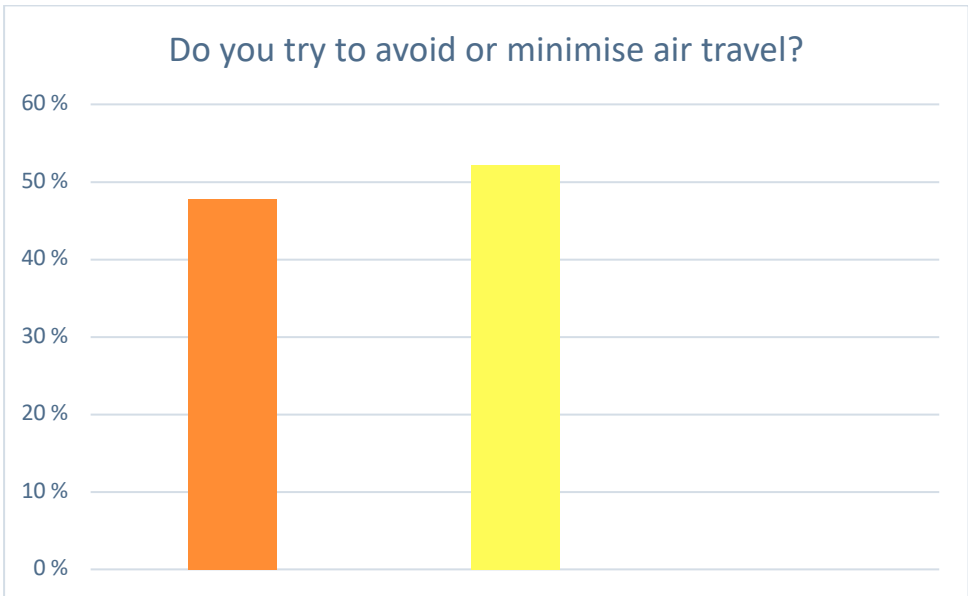
### Flight frequency by region

Regionally the pattern of flight frequency broadly follows the national picture, with a few exceptions. In Northern Ireland and London, residents are the most frequent flyers. Residents of Wales and Yorkshire and Humberside, by contrast, are the most infrequent flyers. For instance, 37% of the Welsh participants and 34% of those from Yorkshire and Humberside rarely or never travel by plane – compared with the national average of 23%

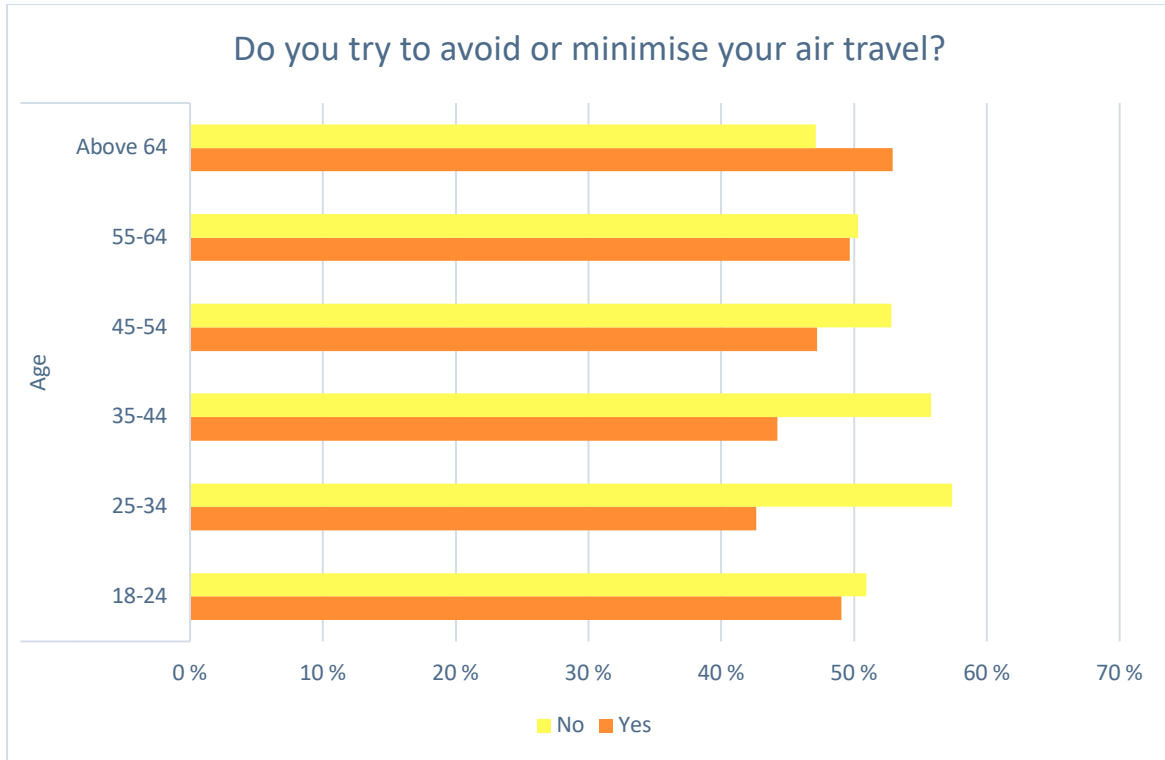


**Attempts to minimise air travel**

A small majority (52%) do not try to avoid or minimise air travel, 48% do. This doesn't vary in any statistically significant way by gender or region



There are some interesting age variations. Perhaps unsurprisingly, the group most likely to frequently fly (25-34) is the age group least likely to be trying to avoid or reduce air travel - 57% are not trying to do so. Once we get past this age point, however, avoiding or minimising air travel steadily increases. So much so that once we reach those aged 64 years +, people are more likely than not to be trying to avoid or minimise their air travel.



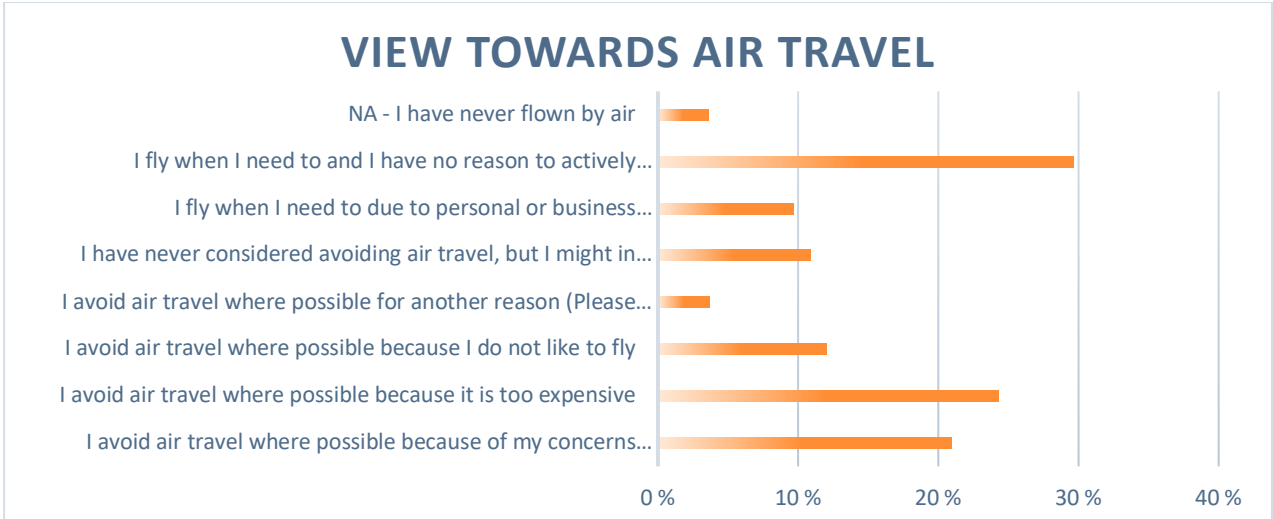
This group is least likely to have their air travel inhibited by costs (17% vs the national average of 24%) and this is not the dominant reasons for their reduced air travel. Other concerns, such as age-related mobility, the cost of travel insurance and health restrictions seem to be bigger factors.

**The environment vs cost**

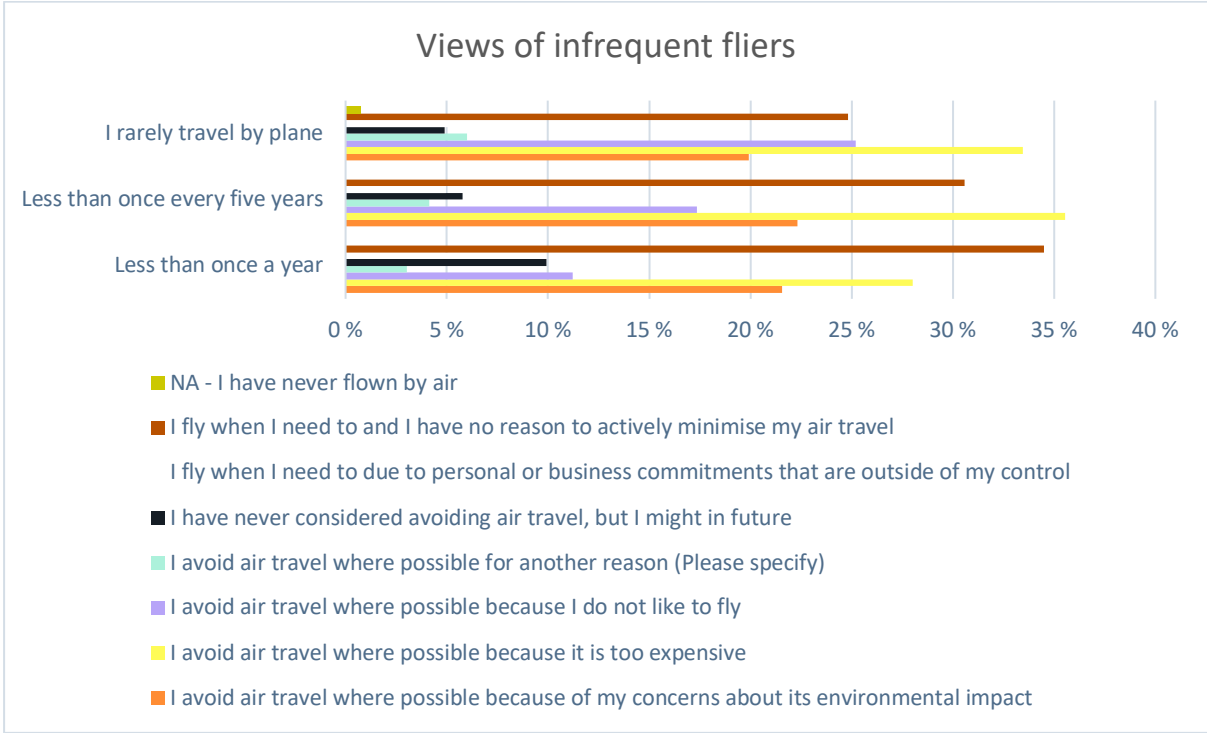
One in ten (11%) might consider avoiding air travel in the future. However, the prevailing attitude is that they fly when they need to and have no reason to actively avoid air travel. This is a view shared by 30%

That’s not to say environmental concerns are not a consideration for any of those studied. A solid one in five (21%) avoid air travel where possible because of their concerns for the environment. This attitude is consistently felt and does not vary significantly by gender, age or region. Furthermore, among the 10% who never fly, 29% say this is for environmental reasons.

Although this is a significant figure, the biggest reason why people avoid air travel is cost (24%). This rises to 33% in the 35-44 age group. This is perhaps because this demographic is the group most likely to be suffering the cost pressures of mortgages and children.

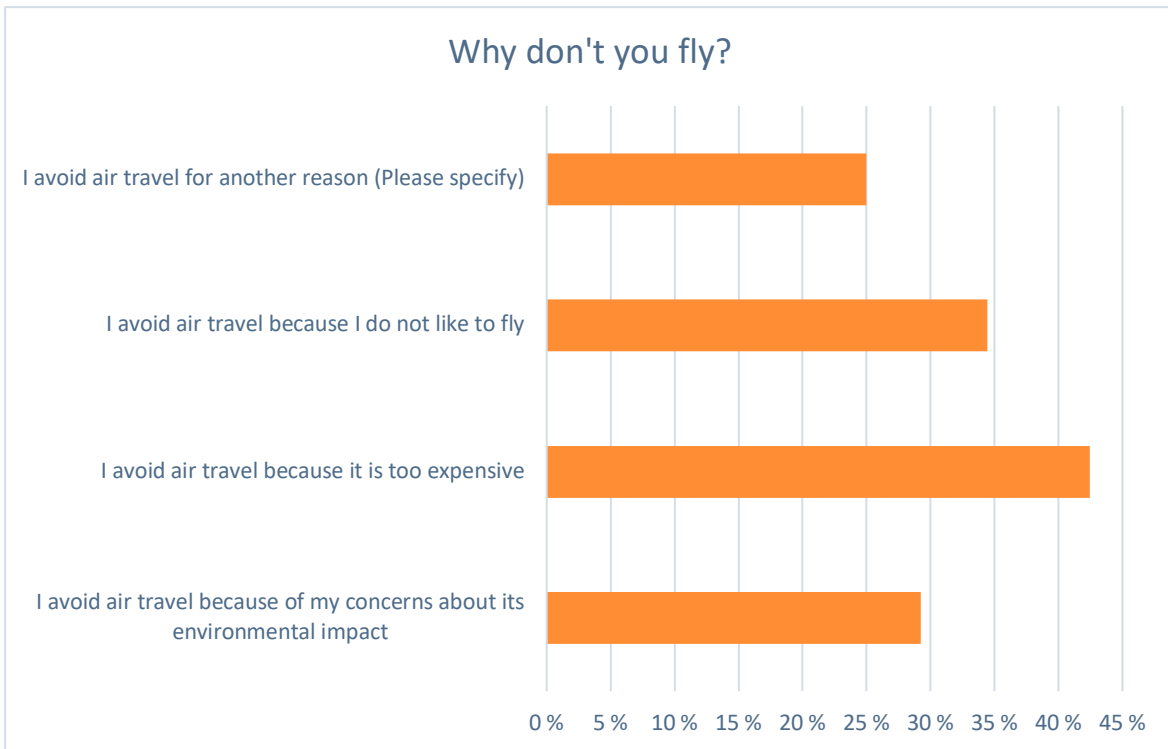


Even when filtering by flight frequency, cost remains the major concern for those who fly less than once every five years (36%), or rarely at all (33%).



### People who don't fly - a closer look

For those who do not fly at all, cost is again the biggest factor for 42%. Though as already mentioned, a significant 29% of non-fliers cite environmental reasons.



### Technology's role

It's clear that, in the current economic climate, cost could be a more immediate and understandable concern than the arguably more abstract environmental consequence of flying. But could the apparent lack of climate anxiety among all but a significant minority also be explained by the public's confidence in technological progress to address the environmental impact of flight? Our research suggests it could.

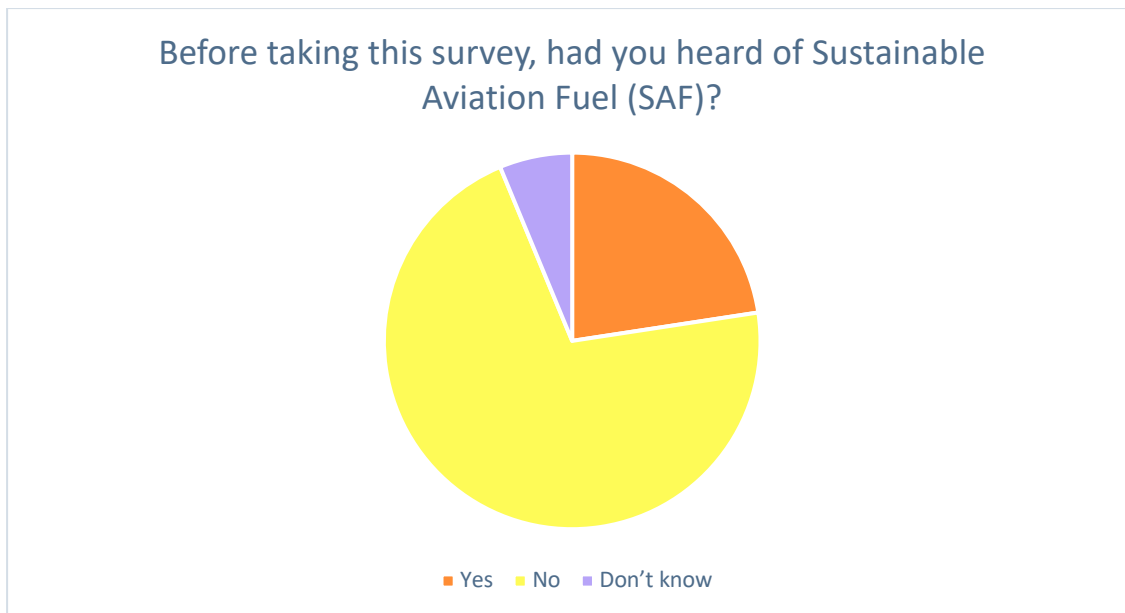
The majority, 69%, agree with the following statement, *over the past decade, there has been a lot of research into the development of new technologies to reduce the carbon footprint of commercial flights*, compared with only 6% who disagree and 24% who don't know.

This high degree of confidence in clean aviation R&D is reflected across all demographics. It rises to 76% among the youngest adults studied.

Only those who rarely or never fly, have a marginally more neutral view.

### SAF awareness and understanding

So, what's the role of Sustainable Aviation Fuel in this? When asked, the vast majority (71%) of respondents have never heard of Sustainable Aviation Fuel and 6% are not sure. Those most likely to have heard of it are in the younger age ranges 18-34, where 30% say they have heard of it.

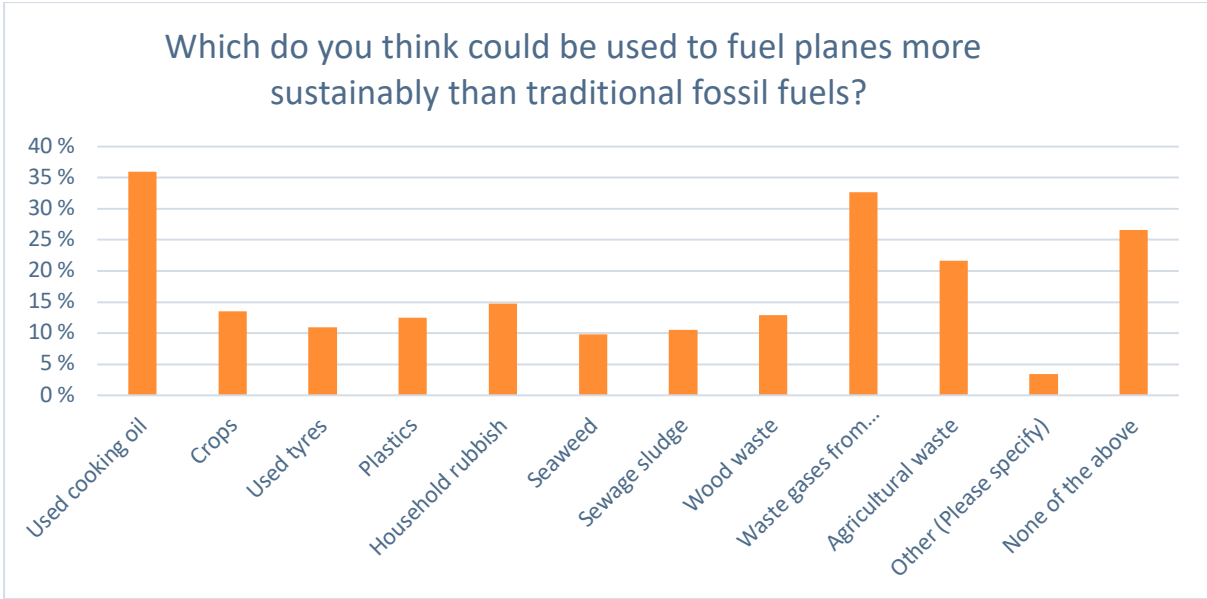


Despite this, 61% correctly infer that Sustainable Aviation Fuel is a sustainable liquid alternative to fossil jet fuel.

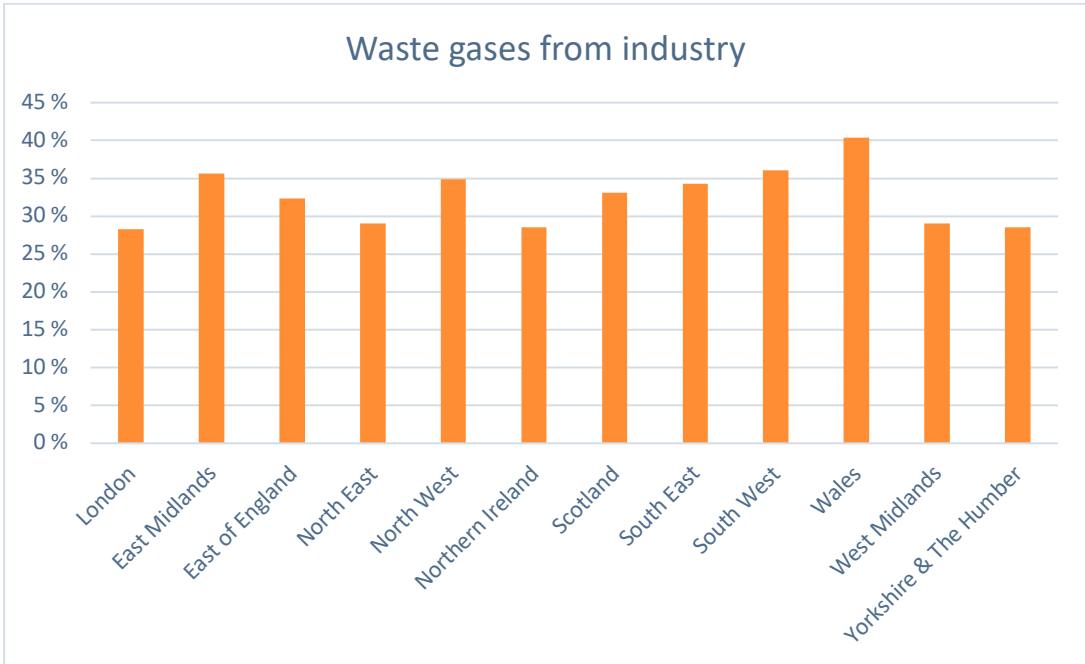
Nearly a third, however, incorrectly assume that the term refers to hydrogen fuel (28%), while 17% believed it includes battery-electric. 29% of those in the youngest age group, (one of the groups most likely to have heard of SAF) are most likely to incorrectly assume the term includes battery electric.

Adding to the mix the 14% who don't know what the term might refer to, this means that there is a clear need to educate the public about Sustainable Aviation Fuel. As not only have most not heard of it but at least 42% can't tell from the terminology what it might encompass.

In terms of what the public believes could be a more sustainable fuel source than traditional fossil fuels, the majority don't seem to be aware of the possibilities. Just 36% see potential in used cooking oil, waste gases from industry is selected by just a third of nominations and agricultural waste is cited by just over one in five (22%) as an option. Furthermore, just over one in four (27%) choose "none of the above" when presented with many plausible alternative fuel sources that are indeed used in the production of SAF.

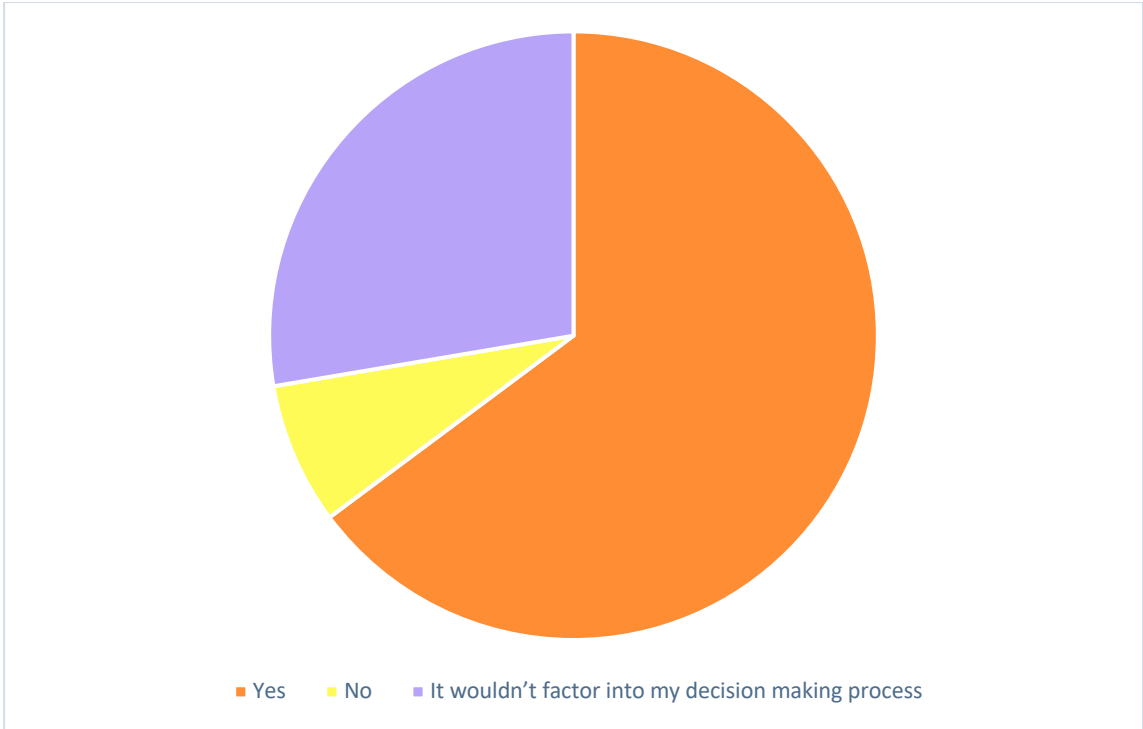


We were surprised to see so many select waste gases from industries (33%) from the list. Inspecting this by region, we find that this number is broadly consistent across the country. However, people in Wales were significantly more likely to suggest waste gases from industry (40%), and Londoners were the least likely (28%).

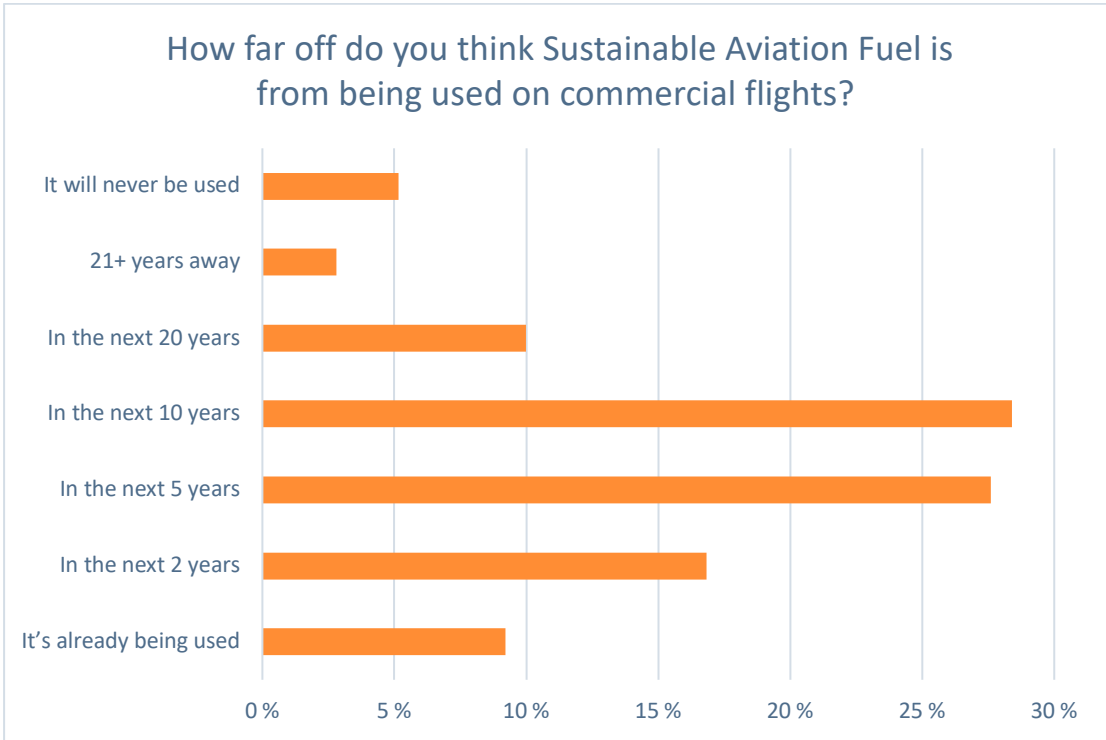


Understanding of the SAF possibilities may be low, but this doesn't mean people are resistant to change. When asked if they would choose taking a plane powered by Sustainable Aviation Fuel rather than a regular flight, assuming the cost was the same, the majority – 65% – answered yes, while only 8% said no. Significantly, though, nearly a third reported that it wouldn't factor into their decision making (28%)





We also asked respondents when they think SAF will be in commercial use. Only 9% correctly answered that it is already in use, with the majority believing it is still five to ten years away (56%). Over one in ten (13%) believe the development horizon is even further away than this and 5% believe SAF will never be used.



In essence, 91% have an erroneous view of Sustainable Aviation Fuel's current commercial use.

## Does this matter?

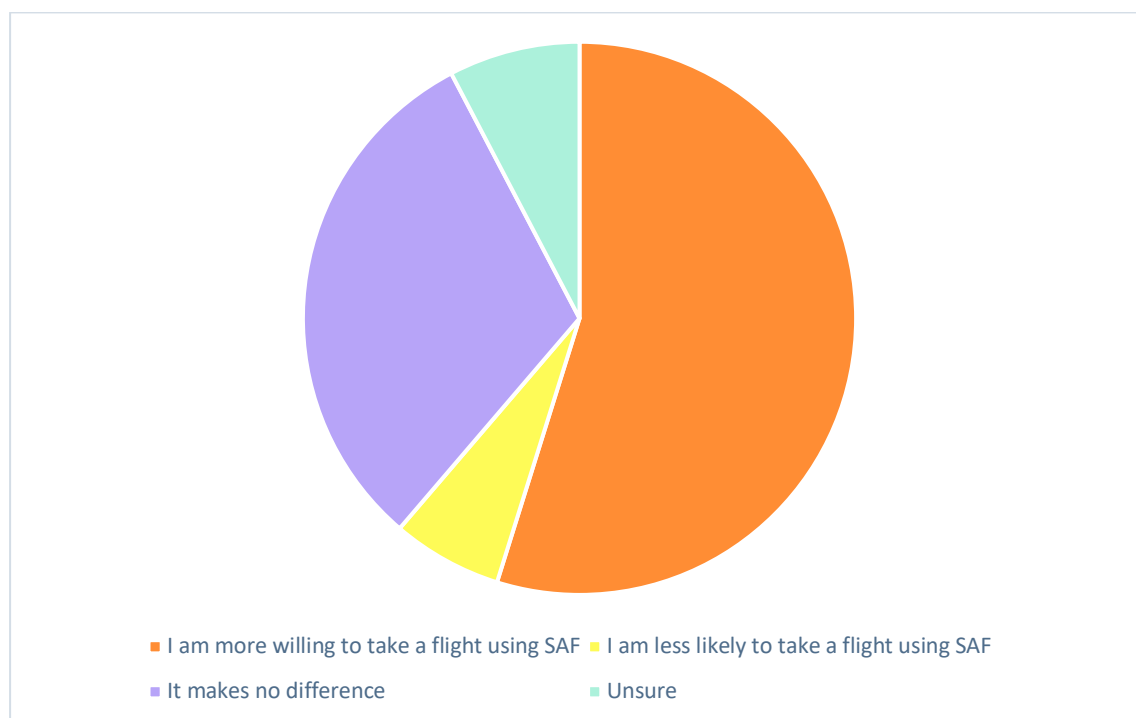
Does this lack of understanding and awareness matter? To gauge this we explored consumer attitudes and behaviour once people are in possession of more of the facts. So, towards the end of our survey, respondents were informed that:

*Sustainable Aviation Fuel is, in fact, already in use on commercial flights.*

*UK producers of Sustainable Aviation Fuel will only use the following waste materials:*

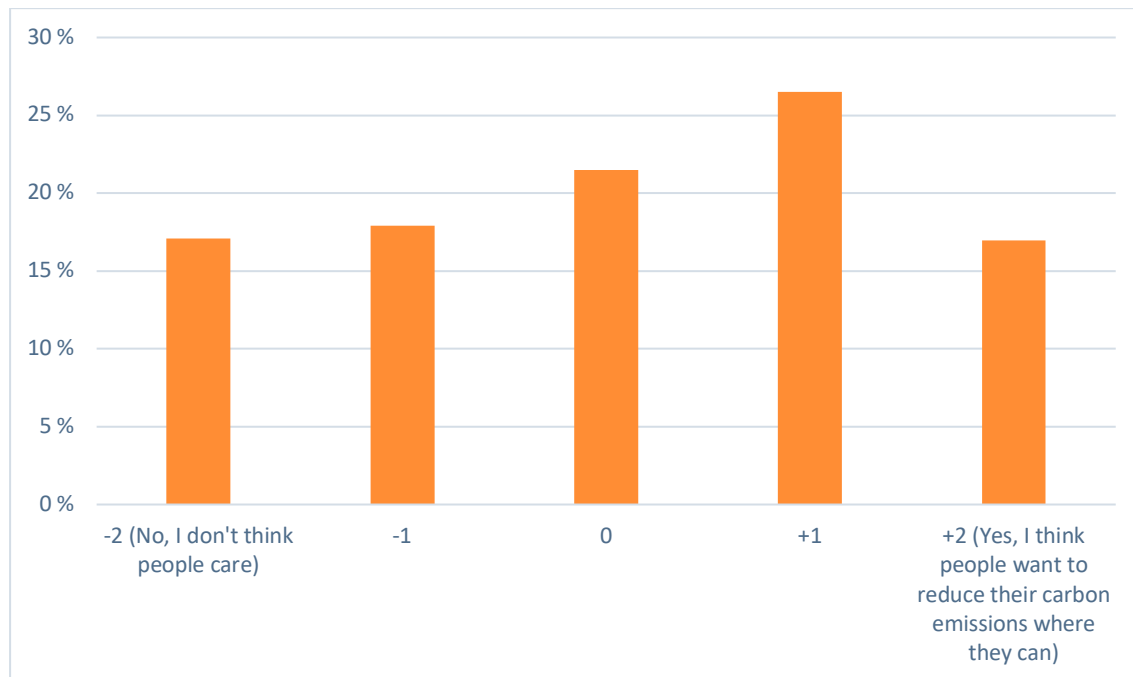
- *Used cooking oil*
- *Used tyres*
- *Plastics*
- *Household rubbish*
- *Sewage sludge*
- *Wood waste*
- *Waste gases from industries*
- *Agricultural waste*

Once they knew all the materials that can be used to create SAF, the majority (55%) said they are more likely to take a flight powered by Sustainable Aviation Fuel, while for almost third (31%) it makes no difference.



Our biggest users of air travel (25-34 year olds) are most likely to be positively influenced by knowing more about Sustainable Aviation Fuel. Almost two-thirds (64%) would be more willing to take a SAF-powered flight, knowing what goes into the fuel.

We also explored what happened once people knew that Sustainable Aviation Fuel was already being used on flights, would they actively seek to fly on aircraft that was powered by SAF to reduce their carbon emissions? The answer was 'yes'. On a scale of 1 to 5, (where 1 = no, no one cares and 5= yes people want to do all they can to reduce their carbon emissions) 44% indicated yes, they'd actively seek out such aircraft, 35% indicated no, and 22% answered neutrally.



Again, our more frequent fliers varied from the norm, with 48% 25-34 year-olds indicating yes. Just 13% in this age group don't think people care at all.

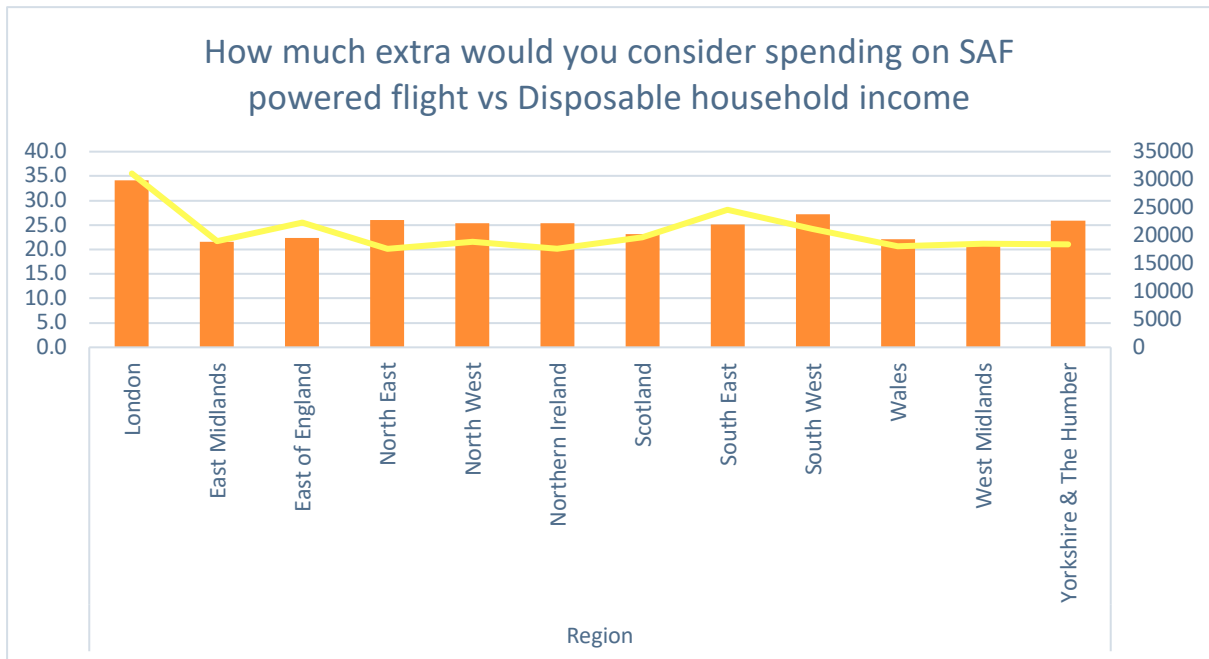
While the public is unlikely to ever be able to choose to travel by fuel type, these answers are a clear indicator of positive sentiment towards the technology.

### Considering cost

As we saw earlier the cost of flying is the most common reason why people avoid air travel, among almost all demographics, except those aged 64+. So, we wanted to interrogate how price-sensitive attitudes to SAF might be.

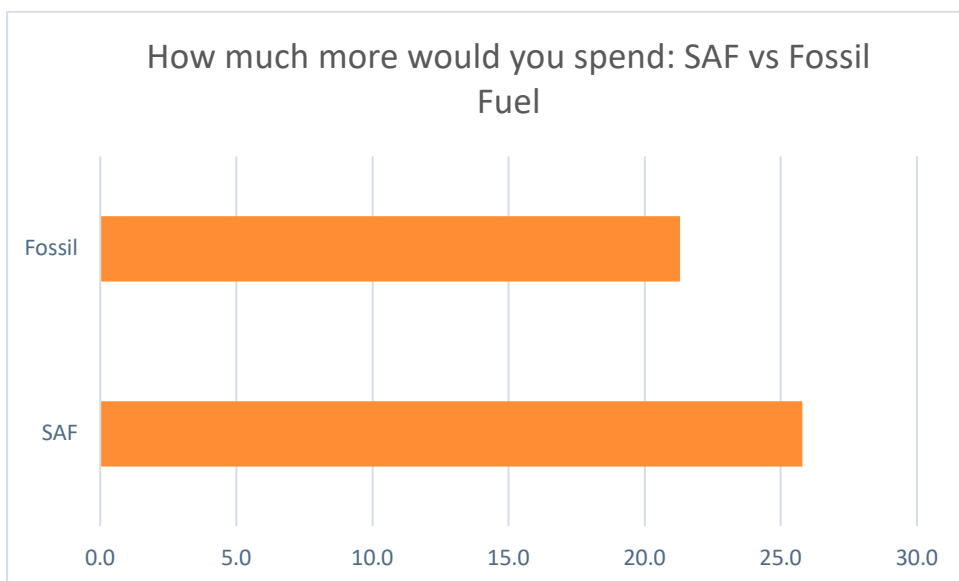
Although work is ongoing to reduce the costs of sustainable aviation fuel (SAF), to date SAF has been more expensive than fossil fuel. The impact of SAF on the costs of flights is intended to be minimal, however all demographics said they would be willing to pay more for flights powered by Sustainable Aviation Fuel. On average, people are willing to pay 26% more.

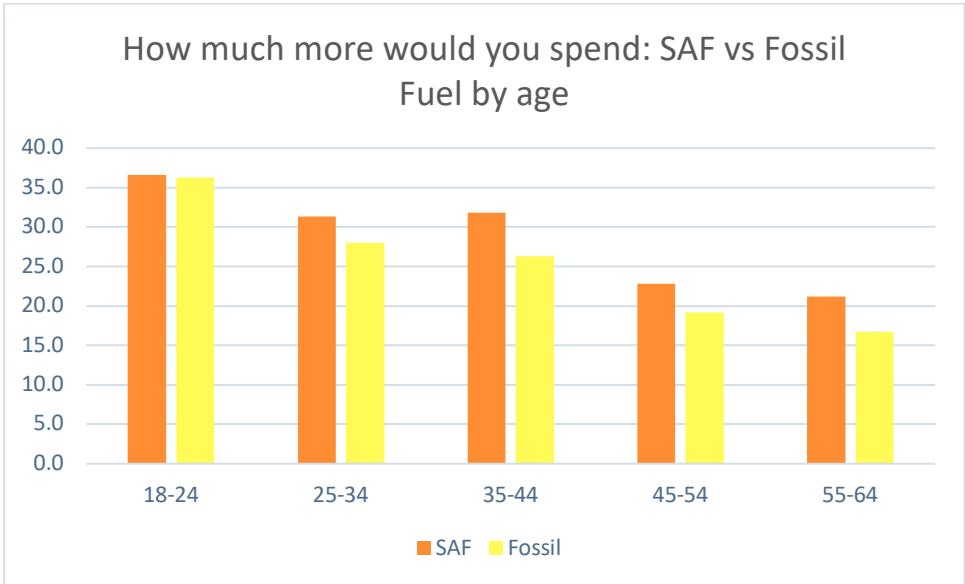
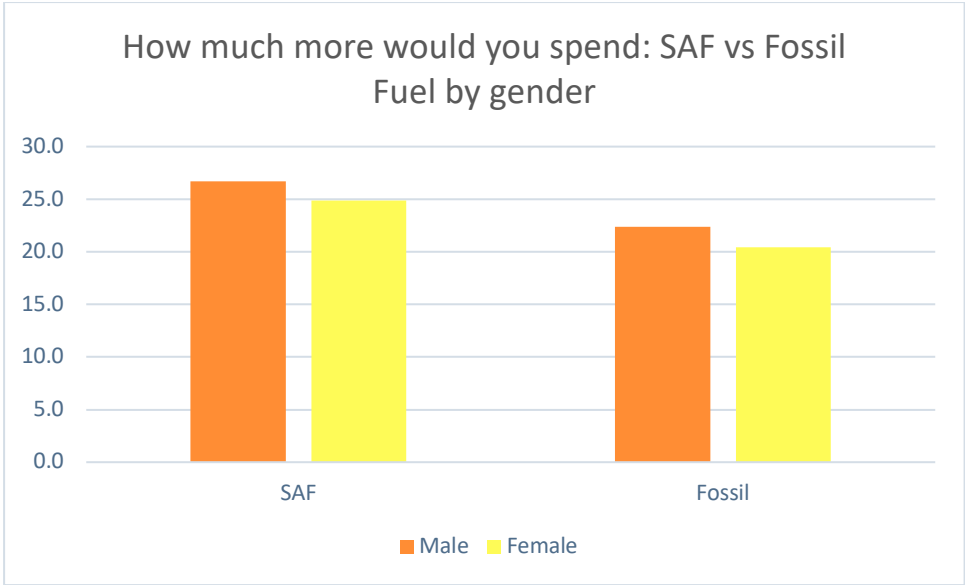
There are some regional variations however, when ONS data is factored in, we see there is a clear correlation between the willingness to pay more for Sustainable Aviation Fuel-powered flights, and disposable income. It is this rather than the region which is at play.

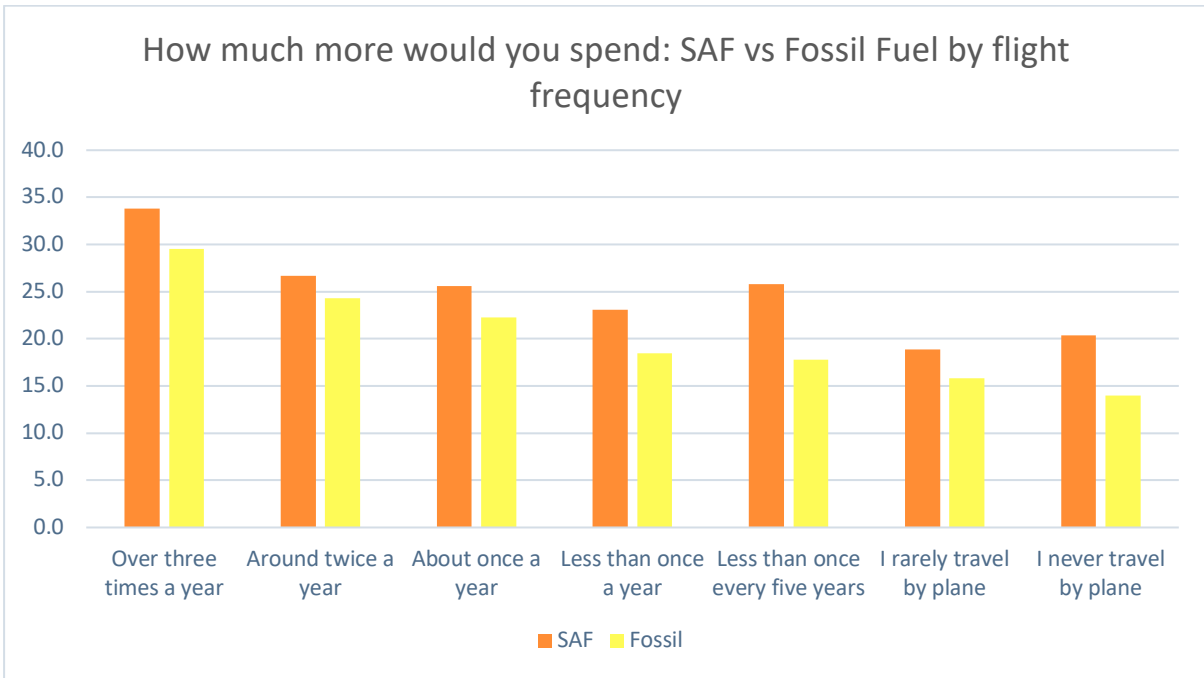
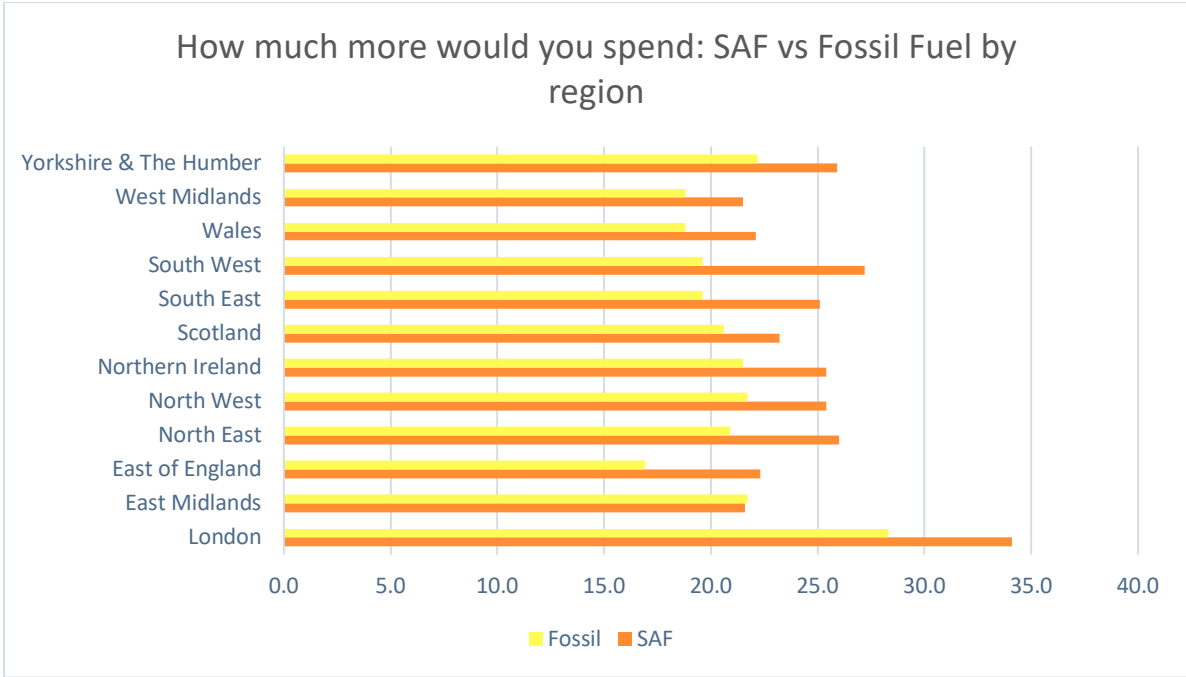


It's also important to note that there is some tolerance for price rises in general. Those interviewed would also be willing to pay 21% more for traditional flights, should the price of fossil fuels increase.

Across the board, though, people are more accepting of a price rise if it's for a flight using Sustainable Aviation Fuel than one using fossil fuels.







## Conclusions

When it comes to flying, cost is more of a concern to most people than environmental impact.

That said, there's a strong contingent (21%) of the UK population actively trying to reduce their air travel for environmental reasons and a significant group of non-flying public who do so to minimise their carbon footprint.

Over two-thirds (69%) feel steps are being taken to improve the airline industry's carbon footprint and are perhaps relying on this happening, rather than curbing their own behaviour.

Despite this, few have heard of Sustainable Aviation Fuel or could correctly hazard a guess as to what it might or might not encompass. Fewer still (less than one in ten) realise it's already in commercial use.

This matters, as once educated about Sustainable Aviation Fuel, 55% would be more likely to fly in general if they knew flights used such a fuel, and 44% would actively seek out flights using SAF. Our cost-conscious air travellers are even prepared to pay more to do so. Across every demographic they are less sensitive to price rises if the fuel used is sustainable.

This suggests a significant opportunity for the industry to educate consumers about what it's already doing and the possibilities moving forwards.

This research was commissioned by Innovate UK Business Connect and delivered by Energy PR. The Government has not been involved in the production of this report and its findings do not represent government policy.