Alternative Fuel Vehicles Report

Driver attitudes to changing technology 2019

Foreword – by Professor Lorraine Whitmarsh

The widespread introduction of alternative fuel vehicles, and fully electric vehicles in particular, requires significant shifts in many aspects of the automotive industry. Supply chains are adjusting to growing demand for high capacity batteries, powerful electric motors and the necessary hardware and software to control them, while vehicle supply channels are upskilling in order to deliver the sales and after-sales service required.

But ultimately, it will be consumer attitudes toward these new technologies that accelerate or check their take-up. While growth in registrations has been strong over the last twelve months, these vehicles remain a tiny percentage of the total UK vehicle parc.

The findings in this report highlight that there is work still to be done in educating drivers about the range of new vehicle technologies available, so that they can make informed choices about how AFVs could fulfil their everyday transport requirements.

There are, however, encouraging indications that individuals recognise the considerable environmental benefits that AFVs bring and that they have an appetite for making purchase decisions based, at least in part, on environmental considerations.

Professor Whitmarsh is an environmental psychologist at Cardiff University's School of Psychology. She is a contributor to the research conducted at The Electric Vehicle Centre of Excellence (EVCE) at Cardiff University.

Introduction

During the last 12 months, alternative fuel vehicles (AFVs) have never been far from the headlines. We've heard that AFV registrations have increased significantly as diesels have become less popular; we've seen the Government end its grants scheme for Plug-in Hybrids and we've witnessed a massive increase in the range of AFVs available from many different manufacturers.

Over the same period, CLM has been busy discovering what everyday motorists really think about AFVs. We have conducted an in-depth research programme into the level of awareness of these vehicles, the amount of knowledge that drivers have about the different types of technology and what factors might encourage or dissuade them from choosing an AFV for their next car.

This report brings together key findings from the responses of over 500 individuals and is essential reading for anyone making decisions about AFVs as part of their fleet strategy.

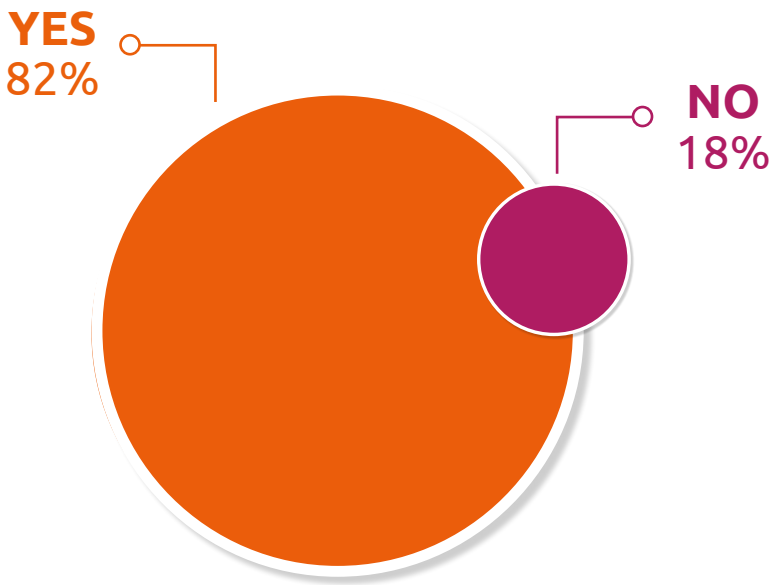
1. Current State of Play

Awareness

The journey to acceptance and take-up of any new technology begins with awareness, plus a rudimentary knowledge of the meaning of relevant terminology.

While a wide range of new car powertrains have entered the market in recent years, they have all been broadly categorised under the 'Alternative Fuel Vehicle' (AFV) banner.

Using this as a starting point we found that there is generally strong awareness of the term 'Alternative Fuel Vehicle', with over 80% of respondents stating that they know what it means.



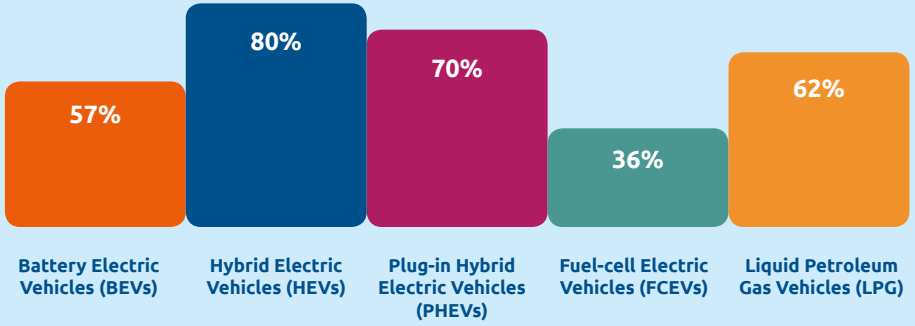
Given the diversity of technology covered by the AFV term, we were keen to delve deeper to understand what types of technology drivers were most familiar with. We prompted our respondents with five types of AFV to see which, if any, they were aware of. These five types were:

- Battery Electric Vehicles (BEVs)
- Hybrid Electric Vehicles (HEVs)
- Plug-in Hybrid Electric Vehicles (PHEVs)
- Fuel-cell Electric Vehicles (FCEVs)
- Liquid Petroleum Gas Vehicles (LPG)

As might be expected, there was a big gap between the most commonly known (HEVs) at 80% and the least know (FCEVs) at 36%. Perhaps most surprising is that less than 60% stated that they had heard of Battery Electric Vehicles.

LPG was included in the list as a measure of how widely known an old, but not widely adopted, technology is compared to the relatively new entrants to the AFV market.

From the following list of alternative fuel vehicle types, can you say which you have heard of before?



Understanding

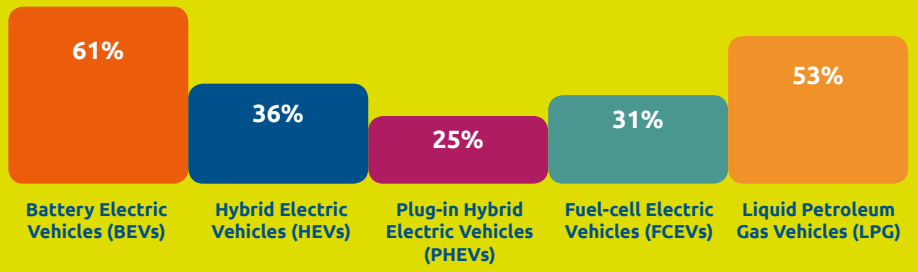
We then looked beyond awareness to test how well understood the different AFV technologies were. To do this, respondents were provided with definitions which they had to match against each type of AFV.

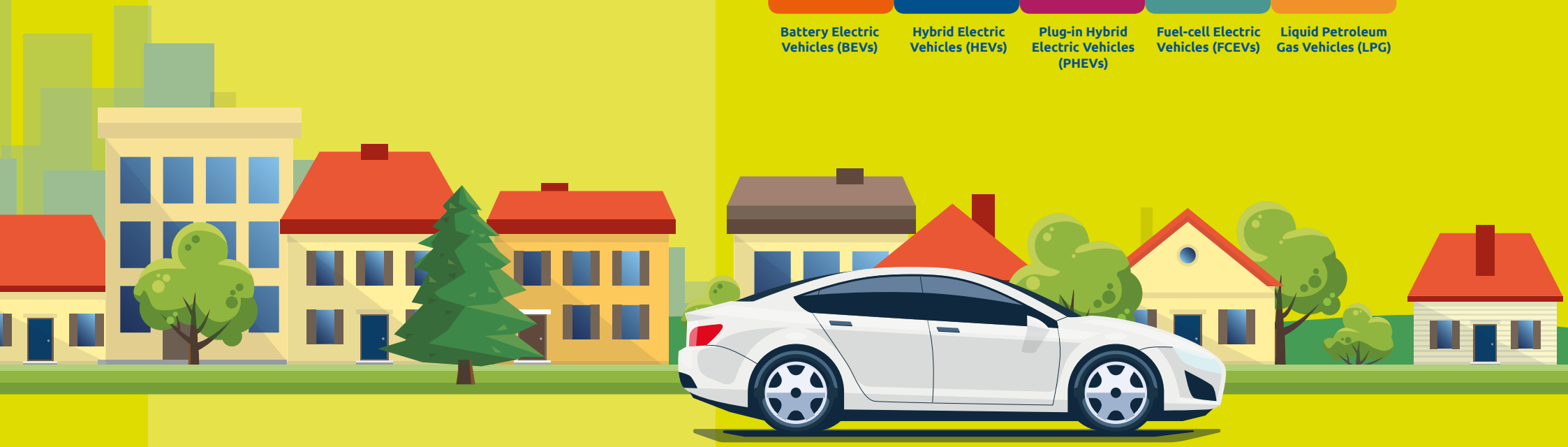
For the type with the highest prompted awareness, the Hybrid Electric Vehicle, only 36% were able to select the correct definition, with Battery Electric Vehicles seemingly being the best understood with 61% selecting the right answer.

This gap in understanding is perhaps the first indication of why AFVs, despite the recent growth in their popularity, remain a niche choice.

We are now going to show you some short definitions of different types of alternative fuel vehicle. For each definition, we would like you to select the vehicle type that it is describing.

Correct definition matches:





Consideration

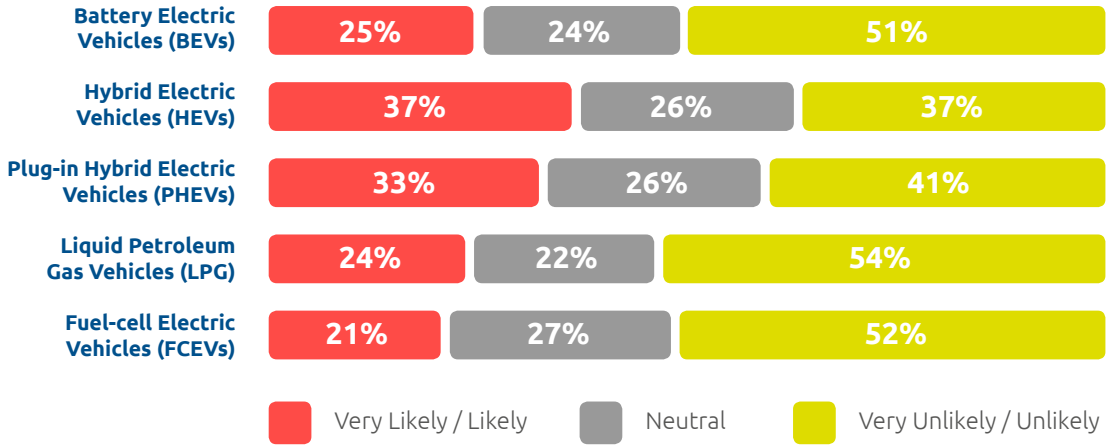
While awareness and understanding give a good indication of the general position of AFVs in drivers' minds, it's the level of consideration which has a closer relationship to their eventual choice of vehicle. When we asked whether respondents would consider each type of AFV for their next car, we found that for even the most mainstream choice (HEVs), less than 40% were likely or very likely to consider them.

Unsurprisingly, hydrogen-powered fuel cell (FCEVs) and LPG vehicles are niche choices. FCEVs are gradually being introduced by a growing number of manufacturers, but prices remain high for the new technology and the refuelling infrastructure remains very limited.

Similarly, as less than 1% of UK vehicles can be run on LPG, there is little incentive for forecourts to provide it and this limited availability reduces its appeal. This is despite low pump prices and relatively clean exhaust emissions compared to either petrol or diesel vehicles. There are currently no manufacturers offering factory fit LPG powertrains in the UK, but there remain a large number of after-market conversions available.

For BEVs, the only vehicles still eligible for Government grants, only a quarter of respondents stated that they were likely to consider them.

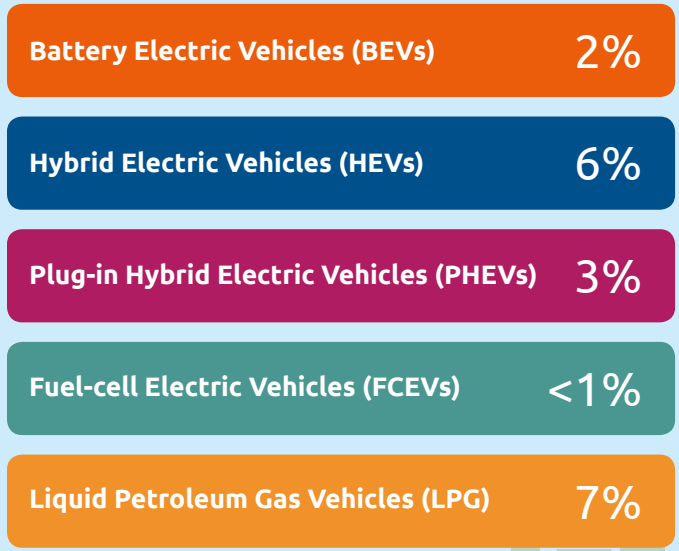
How likely are you to consider each of these types of alternative fuel vehicles the next time you change your vehicle?



Currently Own or Lease

In line with the small volume of AFV registrations reported by the SMMT, the stated ownership of all types of AFVs was low. HEVs were owned or leased by around 6% of respondents, PHEVs by 3% and BEVs by 2%.

Do you currently own or lease an alternative fuel vehicle that fits any of those descriptions?

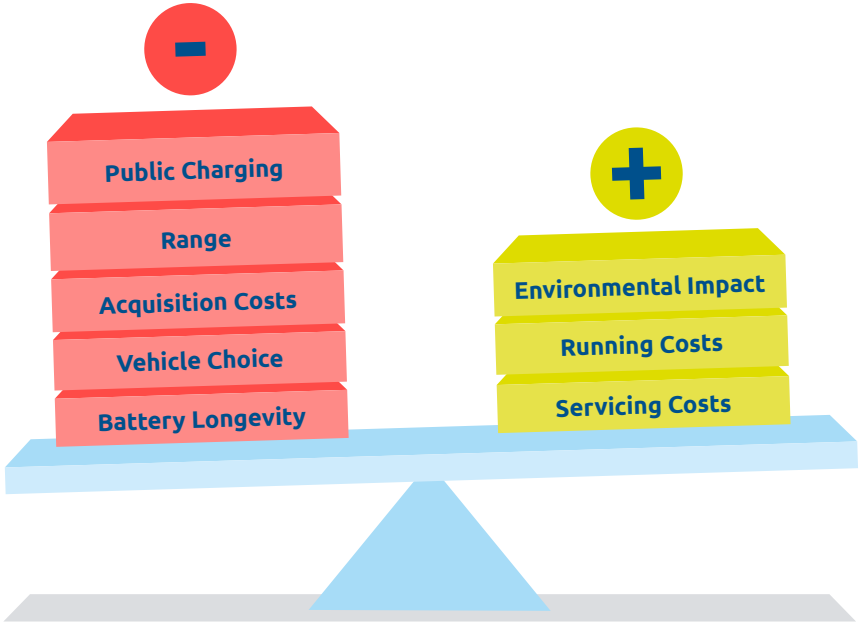


2. Key Factors

Benefits & Disadvantages

We presented respondents with a range of issues related to using an AFV and asked them whether they saw these as a benefit or disadvantage. Not surprisingly, Environmental Impact was seen as the greatest advantage, but this was closely followed by overall running costs. At the other end of the spectrum, acquisition costs, range and access to public charging were seen as the least advantageous.

Thinking about each of the following aspects, please identify whether you see them as a benefit or a disadvantage of owning/leasing an alternative fuel vehicle.



Views of Friends and Family

Though we might dismiss the fact, our perception of how others view our major purchases is an important factor in our decision-making. For highly visible choices such as cars, with their close link to social status, this carries even greater importance.

Over 60% of our respondents expected a positive or very positive reaction from friends and family if they were to choose an AFV for their next car, and fewer than 4% expected any sort of negative reaction. These figures demonstrate that AFV take-up is far more likely to benefit from peer influence than be hampered by it.

If you were to buy or lease an alternative fuel vehicle in future, what do you think would be the response from your friends and family?

Very Positive	Positive	Neutral	Negative	Very Negative
24.6%	38.8%	33%	2.9%	0.7%

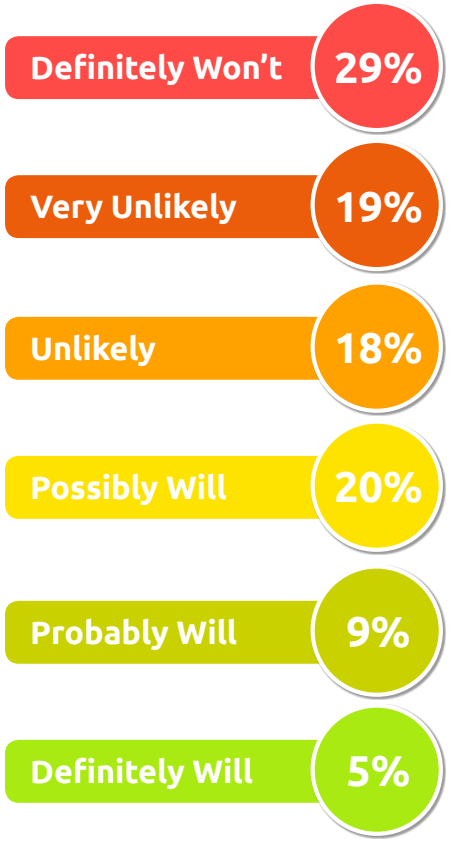
Future of Diesel

29% of respondents stated that they would definitely not choose a diesel for their next car, and a further 37% stated that they would be unlikely or very unlikely to choose one. This sentiment is plainly reflected in declining diesel sales, with 2018 registrations falling by around 30%.

The decline of diesel has been largely blamed on punitive company car tax rates and uncertainty regarding the introduction of Clean Air Zones in major cities. While this is understandable, it should be noted that diesel cars which meet the latest (Real Driving Emissions 2) standards are exempt from the 4% company car tax surcharge placed on more polluting diesel vehicles.

While falling diesel sales have prompted an increase in petrol car registrations, perhaps the most significant impact has been the growth in AFV registrations, up around 22% in 2018.

How likely would you be to choose a diesel next time you change your vehicle?



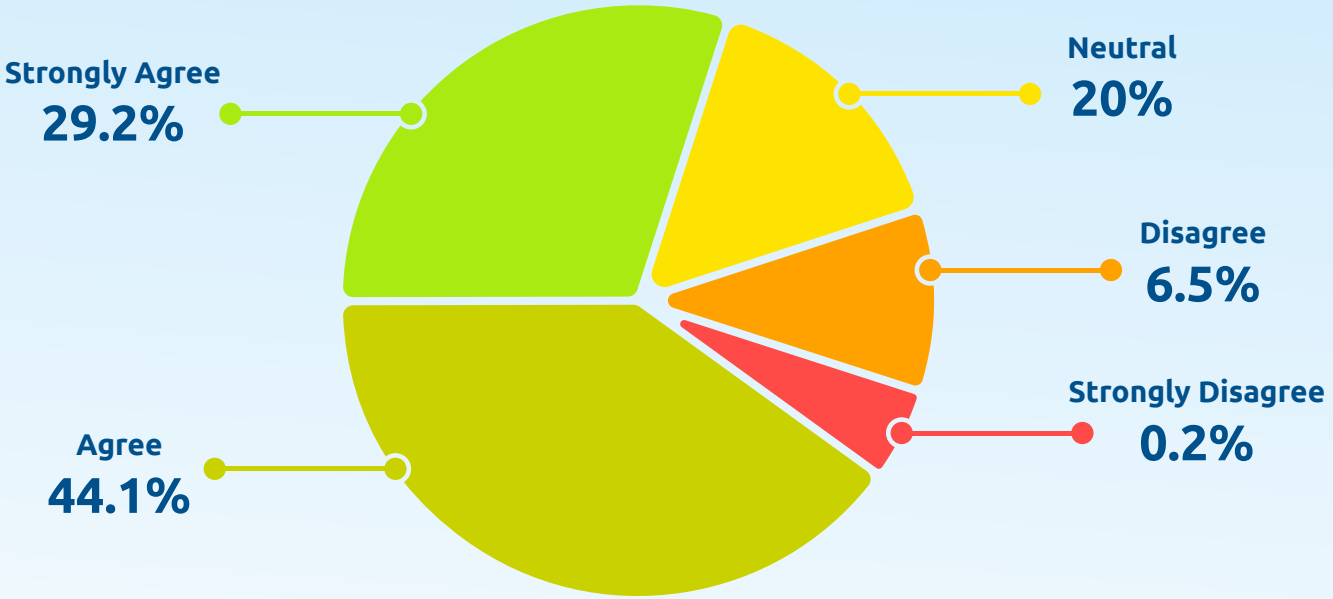
Importance of the Environment

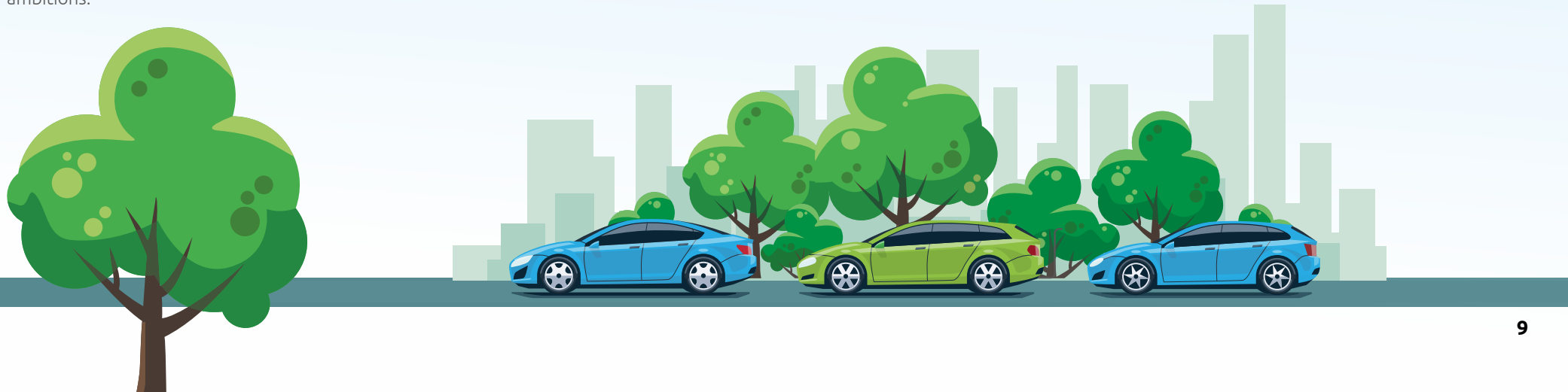
As we've seen earlier, the positive environmental impact of AFVs is seen as their key benefit. But how important is this to individuals when making important lifestyle choices?

To get a handle on this, we asked respondents to what extent the following statement applied to them: 'Taking action to protect the environment is an important part of who I am.'

Overall, nearly three quarters of respondents stated that they agreed or strongly agreed with the statement, and less than seven percent disagreed to any extent. In this context, AFVs could be seen to provide consumers with a good opportunity to meet their environmental ambitions.

To what extent do you agree that the following statement applies to you?
"Taking action to protect the environment is an important part of who I am"



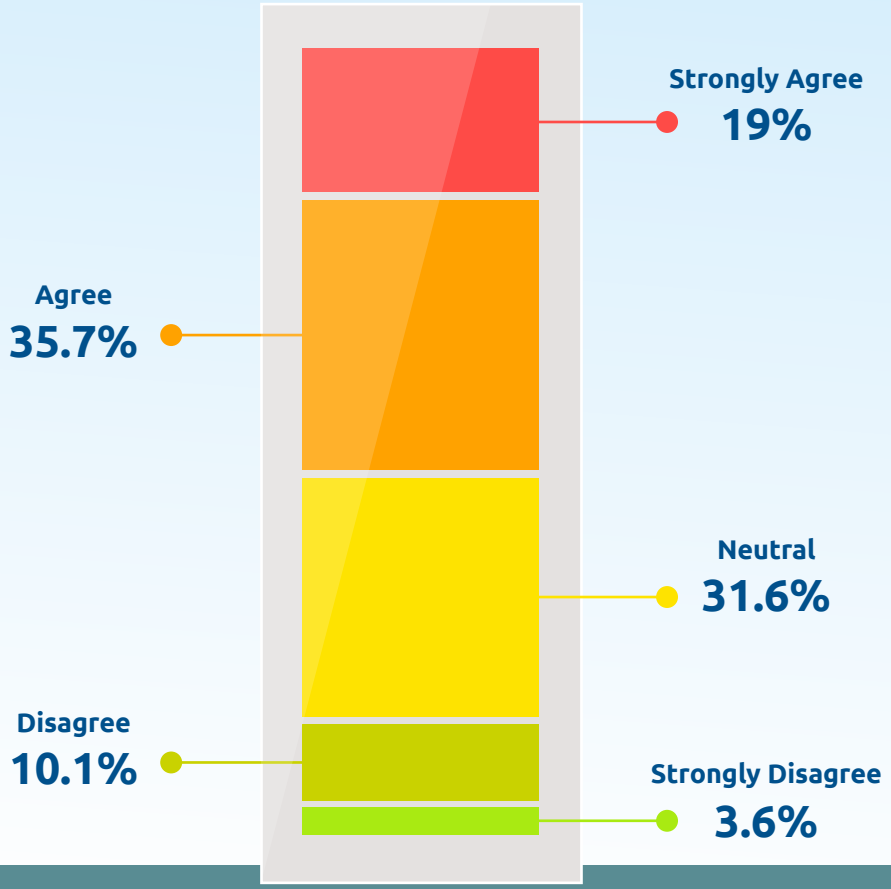


Ease & Convenience

Environmental considerations may be high on the driver's agenda, but practical mobility needs also need to be met. We asked respondents to what extent they agreed with the following statement: "Using an alternative fuel vehicle makes life more difficult on a daily basis than using a petrol or diesel car".'

In total, almost 55% either agreed or strongly agreed with this assertion, with just under 14% disagreeing. While this would appear to be one of the biggest hurdles to increasing the consideration and uptake of AFVs, better knowledge of AFV technology and the day-to-day usability of hybrid vehicles is likely to change perceptions.

To what extent do you agree with the following statement: "Using an alternative fuel vehicle makes life more difficult on a daily basis than using a petrol or diesel car."



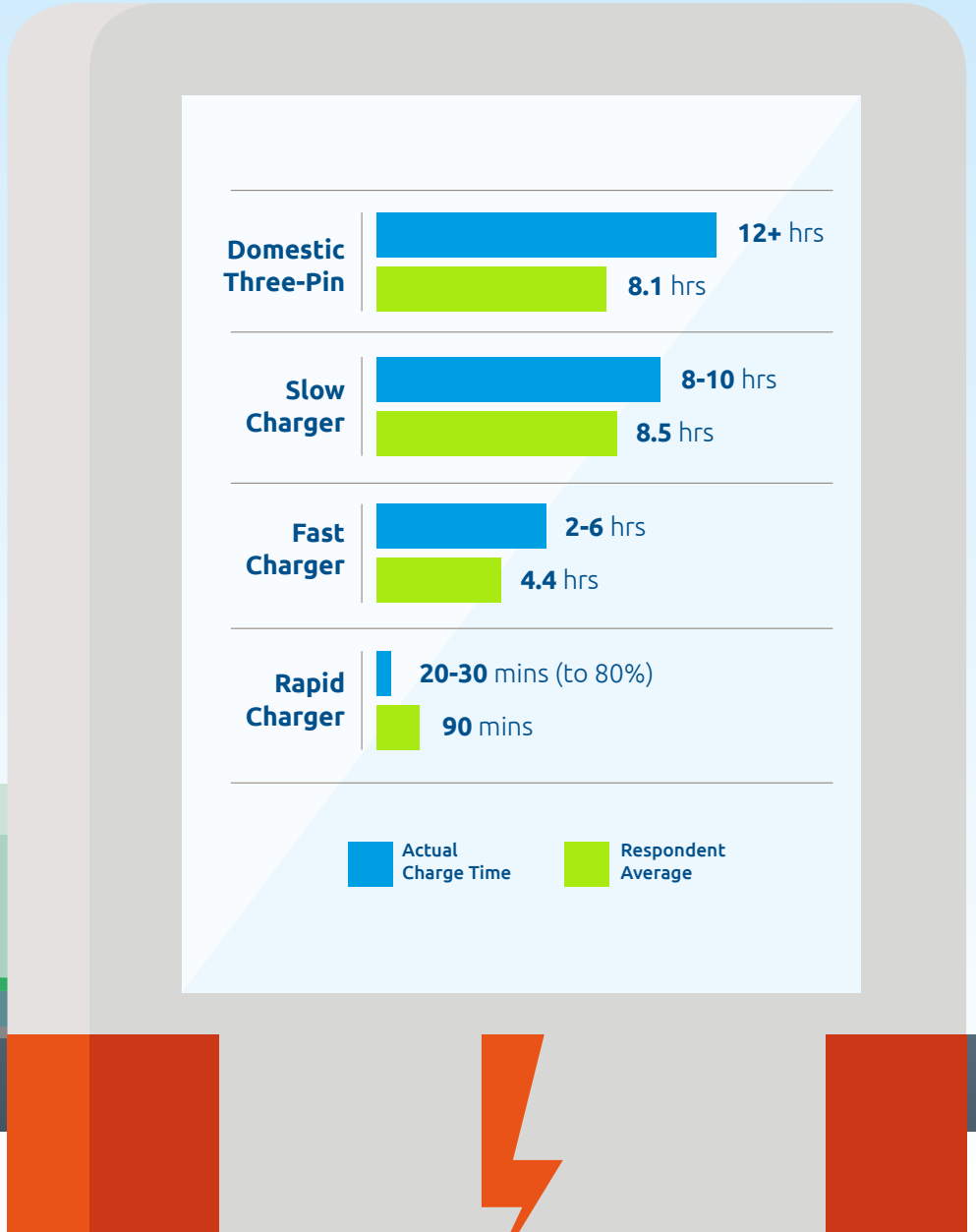
Charge Times

While access to public charging has already been called out as a disadvantage to plug-in ownership, there's another factor that's perhaps equally important – the time it takes to recharge depleted batteries.

Although there is a degree of knowledge when it comes to how long it takes to recharge plug-in vehicles, there are significant misconceptions. Respondents are over optimistic when it comes to the charge-times achieved through use of domestic sockets, but underestimate the speed of rapid chargers.

More education about the ever-increasing numbers of public rapid charge points, and their '20 minutes to 80% charge' capability, should help to dispel the two most serious disadvantages perceived by drivers.

The charge times for battery electric vehicles (BEVs) depend on the type of charger used. For each type of charger, please estimate how many hours it would take to recharge an average BEV from empty.



And Finally

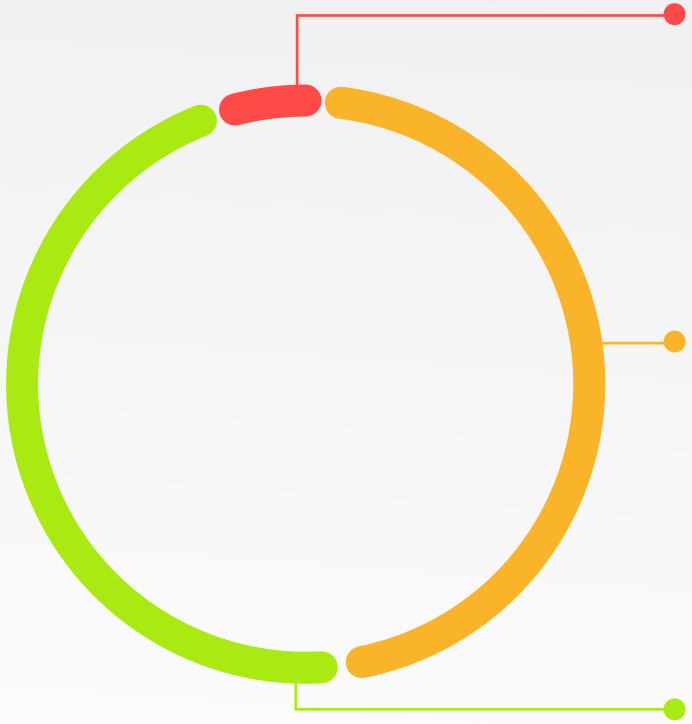
In an attempt to incorporate all of the factors influencing individuals' attitudes towards AFVs into a single overall position, we sought views on how common these vehicles would be in 20 years' time. The collective view was clear, with almost 90% of our respondents believing that in 20 years from now, either most or all vehicles sold will run on alternative fuels.

This overwhelming majority indicates that while there may still be barriers to uptake of AFVs for some individuals, there is a definite movement towards their dominance of personal mobility.

Want to know more about how Alternative Fuel Vehicles could work for your fleet?
Visit the CLM AFV hub at **www.clm.co.uk/afv**
Speak to one of our fleet management experts on **01908 210100**

Research Notes
This research was conducted over a period of 12 months from November 2017 to November 2018 by CLM Fleet Management Plc. Over 500 drivers completed an in-depth online survey on an anonymous basis.

Which one of the following statements most closely matches your view on the future of alternative fuel vehicles?



10.4%
20 years from now, alternative fuel vehicles will still be the minority of new vehicle sales in the UK and petrol or diesel will still dominate.

46.8%
Within 20 years most new vehicles will be alternative fuel but some traditional petrol or diesel vehicles will still be sold in the UK.

42.8%
Within 20 years all new cars will be alternative fuel and no traditional petrol or diesel vehicles will be sold in the UK.

About CLM

Part of the Maxxia Group of companies that comprises Maxxia, Anglo Scottish Asset Finance and Capex Asset Finance, Newport Pagnell-based CLM manages in excess of 15,000 vehicles on behalf of UK corporate clients.

Since the company's foundation in 1981, CLM has pioneered the concept of Total Fleet Management - an integrated approach that combines all facets related to the management of a vehicle fleet through a single point of contact and delivered as a consolidated output.

CLM is solely a fleet solutions provider and, with a focus on transparency and best value, is able to actively manage mixed fleet scenarios through a range of diverse competing suppliers, financiers and manufacturers, to deliver optimum results.

With a senior management team that combines many years' experience in all aspects of the fleet market and with leading edge technology and systems, CLM delivers effective solutions through innovation, a comprehensive range of products and a dedicated and highly trained support staff.

CLM was accredited to the Investors in People standard in 1997 and re-accredited ever since.

CLM Fleet Management

Corporate House,
Jenna Way,
Newport Pagnell
MK16 9QB

Find out more or talk to us about your requirements
Call us on 01908 210100

email info@clm.co.uk or visit www.clm.co.uk