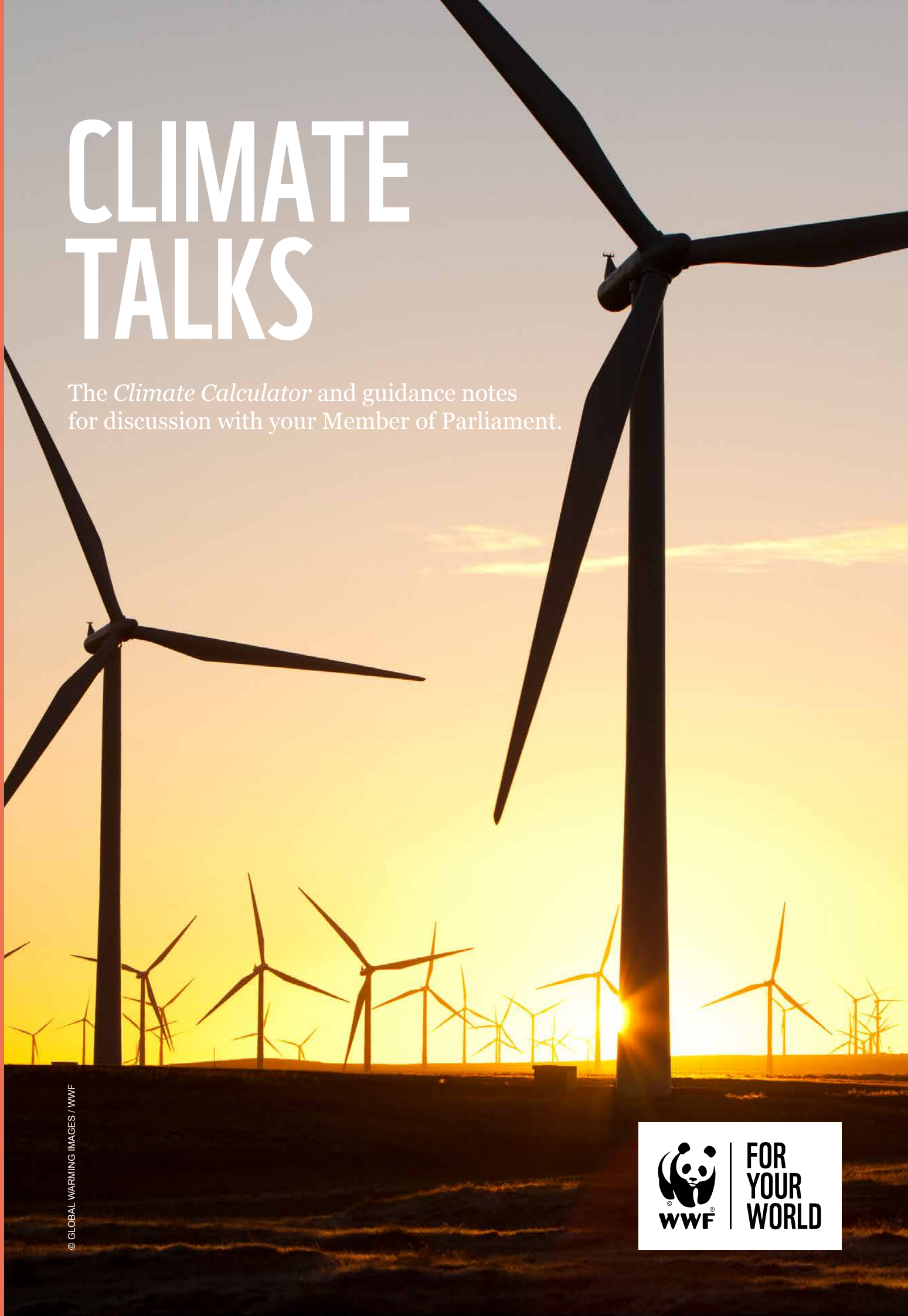
CLIMATE TALKS

The *Climate Calculator* and guidance notes for discussion with your Member of Parliament.



WWF FOR YOUR WORLD

WHY HOST A SESSION WITH YOUR MP ON CLIMATE?

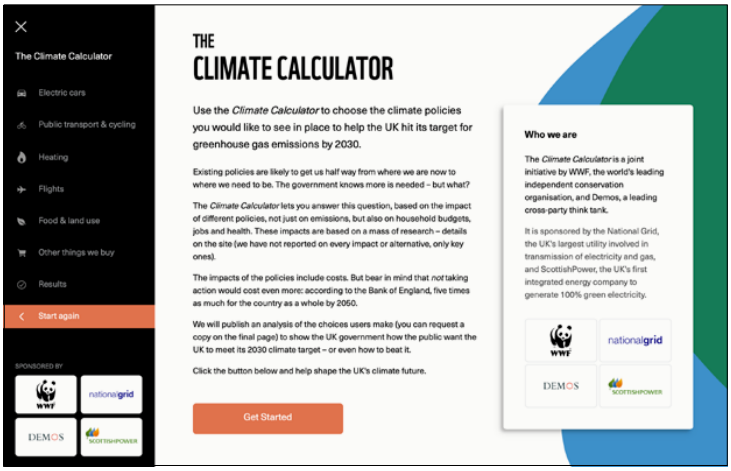
- As the host country for the upcoming UN Climate Conference, COP26, in Glasgow, the UK has a critical role to play in using the event to increase momentum for climate policy and activism all around the world.
- MPs need to hear that the UK public want the government to lead the world in reducing carbon emissions and use COP26 to drive global action on climate
- MPs are more likely to prioritise local environmental projects and support climate policy in their parliamentary work if they hear that their constituents care about these issues - whether it's a conversation between you and your family, or a big event in your town hall, it's important for us all to have a voice on how we are going to build a greener, fairer society.
- This pack provides a guide for how to go about hosting a local event and involving your MP in a workshop on climate action, helping to demonstrate the community's commitment to protecting the environment and taking action on climate at a local, national and international level.

WHAT IS THE CLIMATE CALCULATOR

AND HOW CAN I USE IT IN AN MP SESSION?

https://climatecalculator.co.uk

DEMOS



WHAT IS THE CLIMATE CALCULATOR?

The Climate Calculator is a new tool developed by WWF with think tank Demos that allows users to explore the actions needed to reach the UK government's climate target over the next decade.

Actions are grouped into areas where reducing emissions could have the biggest impact on the day-to-day life of the public. These are cars; public transport; heating; flights; food & land-use; and products we buy.

Users choose the level of ambition for decarbonisation in each area, and where the costs for decarbonisation fall. As policies are selected, users can see how emissions reductions help to achieve the UK's climate targets, alongside the impact of their choices on the cost of living, taxes and jobs.

HOW CAN YOU USE THE CLIMATE CALCULATOR IN AN MP SESSION?

The climate calculator can provide a structure for the session with your MP. You can choose whether you'd like participants to complete the calculator before the session or during it.

You can then use the results of different participants and for different areas to talk to your MP about the local and national climate solutions that you, as their constituents, support. You can also use the results to discuss in more detail the trade-offs or challenges of climate solutions.

We provide talking prompts to help structure conversations with your MP on each area, and extra resources on what climate change is, and how to reduce emissions from each sector, in the guidance notes below.

DURING THE EVENT

Please see a suggested format of an event below – remember, this is only a guide and you should feel free to use the information provided here in the best way that suits your circumstances for your community.

Welcome & introductions	Introduce host, participants and guest MP. Run through agenda and objectives of the event. (If virtual) How to interact e.g. using chat box to share thoughts/ questions, and using the raising hand feature during Q&A.
Showing what's at stake	Use WWF content to open the event and demonstrate what we're all fighting for. See WWF YouTube channel for useful videos: https://www.youtube.com/user/wwfunitedkingdom
Speaker-context and scene setting	Set the context for the event: COP26, Net Zero and what governments need to be doing. (See Information Sheets in the Appendix below) Make relevant to local area e.g. in a rural community, you may want to talk more about land use and agriculture.
Climate discussion	General discussion on climate action and climate change in the UK and abroad. Talk about each of the key polluting areas and the participant's results of the calculator. (See Talking Prompts in Appendix below) - Car use - Public transport - Air travel - Diets, farming and habitat restoration - Products we buy (If virtual) use breakout rooms to talk through discussion points
Sum up, next steps, close	Set out what you'd like your MP to do. (See suggested activities below) What now, and how to get participants further involved. (See suggested activities below)

AFTER THE EVENT

- Share main discussion points with MP as a reminder of what is needed from them
- Share how your event went on social media – please tag **#GreatBigGreenWeek** and **#wewontforget**
- Email publicaffairs@wwf.org.uk with details of the event – We would love to hear more about what you've been up to, and how we can work with your MP to do even more.

APPENDIX:

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TALKING PROMPTS FOR DISCUSSION ON CLIMATE USING THE CLIMATE CALCUATOR

See information sheets below for more detail

GENERAL:

- Is the UK doing enough to tackle climate emissions?
- Why is climate action important to participants?
- What would they like their MP to do locally to make their area greener? What can they ask the government to do nationally?

ON CAR USE

- Was there anything that surprised anyone about their results on the electric vehicles section?
- Do we have enough local support for electric vehicle charging points?
- What is government doing to make electric vehicles accessible for lower income households?
- Does anyone have concerns about electric vehicles? Ask MP to comment on these concerns.
- What are the opportunities for electric vehicles in terms of air quality, new jobs and industries? Ask MP to comment on opportunities.

ON PUBLIC TRANSPORT, WALKING AND CYCLING

- Was there anything that surprised anyone about their results on the public transport, walking and cycling section?
- What did participants think about the possibility of restrictions on cars entering city centres, or restricting car speeds?
- How is public transport locally? Does anyone have comments or concerns about public transport provision? Ask MP to comment on these concerns or suggestions
- How is infrastructure for walking and cycling locally? Does anyone have comments or concerns about public transport provision? Ask MP to comment on these concerns or suggestions
- How important do participants think public transport is in cutting emissions? What other opportunities are there?

ON HEAT IN HOMES

- Was there anything that surprised anyone about their results on the heat in homes section?
- What is your understanding of the impact of heating your home on the environment? Do you know much about cleaner alternatives for heating?
- Does anyone have concerns or questions about cleaner heating and more efficient homes, and how it is paid for? Ask MP to comment on this.
- What are the opportunities from cleaner and more efficient homes? Ask MP to comment
- What is the local aspect for this? Is fuel poverty a big issue in this constituency? Are there lots of off gas grid homes in this constituency, where homes rely on LPG, oil and coal for heating? Are there any local programmes helping people to make their homes cleaner and more efficient?

ON AIR TRAVEL

- Was there anything that surprised anyone about their results on the air travel section?
- Do you think we need to reduce how much we all fly, or only the most frequent fliers?
- Ask MP to comment on how they think government can help to cut emissions from flying in the near term
- Local aspect- is there an airport in your constituency? How can jobs at the airport be protected, or employees be retrained for greener jobs?

ON DIETS, FARMING AND HABITAT RESTORATION

- Was there anything that surprised anyone about their results on the food and land use section?
- What do participants think of cutting the amount of high carbon foods we eat? How should government support changing diets?
- How can we cut emissions from food, ensure everyone can afford to eat healthily, and make sure nature is protected? Ask MP to comment
- Is the government doing enough to support farmers to make their practices more sustainable?
- Local aspect- is this a rural community? What do farmers think of more sustainable methods of farming? Are there any local projects that use nature to reduce flooding or improve soil health? What opportunities are there in improving your local green spaces?
- Is there enough high-quality green space in your local area? What is done to protect it?

ON PRODUCTS WE BUY

- Was there anything that surprised anyone about their results on the other things we buy section?
- Do participants think that we should pay more for higher carbon products? How do you think people should be compensated for having to pay more tax?
- How can we ensure products we buy are used longer, able to be repaired, and are properly recycled? Are local recycling facilities up to the job?
- Are consumers adequately aware of the environmental impact of the goods they buy? If they are, to what extent would this be taken into consideration when making consumer choices?

INFORMATION SHEET 1:
CLIMATE CHANGE IMPACTS TODAY

Are we already seeing global heating?

Yes. The UN's Intergovernmental Panel on Climate Change (IPCC) estimates that human activity has led to a rise in average temperature of roughly 1°C relative to pre-industrial levels due to the effects of greenhouse gases emitted into the atmosphere. The 2010-2019 decade was the warmest on record globally.

This is due to the greenhouse effect, which occurs when greenhouse gases like carbon dioxide and methane trap heat from the sun in the Earth's atmosphere. This leads to increases in global temperature'.

What effects are climate change already having globally?

Global sea levels rose by around 4.6 mm per year over the last decade and are, on average, around 21 cm higher than at the start of the 20th century. This was the fastest decadal rise that has been observed and substantially faster than over the previous decade, particularly due to increased melt from ice sheets on land.

Changes in the probability of extreme events over the last decade have regularly been linked to human-induced climate change. For example, the increase in the frequency and severity of heatwaves is having clear impacts, including on mortality in the UK. In 2021 alone, record breaking events such as the wildfires in Turkey and Greece as well as flooding in the UK and Germany have all dominated world news and resulted in thousands of deaths and loss of homes.

Climate change is also causing impacts on ecosystems. For example, there are now regular bleaching events of coral reefs like the Great Barrier Reef. It is estimated that if gloabl temperatures rise by over 2°C, only 1% of current coral reefs will still exist at the end of the century.

INFORMATION SHEET 2:

GLOBAL CLIMATE ACTION

What is the Paris Agreement?

The Paris Agreement promises governmental action to reduce greenhouse gas emissions and aims to limit global temperature increase to a maximum of 2 °C, but preferably 1.5°C, above preindustrial levels. This is considered to be a 'safe' level of planetary warming. 191 nations signed The Paris Agreement in 2015.

What is the difference between a 1.5°C and 2°C temperature rise?

This difference of 0.5°C is important. The impacts felt at 2°C above preindustrial levels are significantly worse and more devastating to those felt at 1.5°C.

For example, summers without sea-ice will be ten times more frequent at 2°C than 1.5°C, whilst plant and vertebrate species loss will be 2x greater. Similarly, the number of people globally exposed to an extreme heatwave every 5 years will increase by 250% if global warming reaches 2°C above preindustrial levels compared to 1.5°C. This poses a real threat to human life, as heatwaves can cause fatal dehydration as well as respiratory and heart problems.

Capping the increase in global temperatures to 1.5°C would require a considerably greater reduction in emissions, more than double that of 2°C.

Is the world on track to achieving the Paris Agreement goals?

As of 2021, the UNFCCC (United Nations Framework Convention on Climate Change) has reported that climate targets are not on track to be met. It predicts we will see a temperature rise of over 2.5°C by the end of the century. Nations must double their emissions efforts and submit more ambitious and transparent action plans for the Paris Agreement to be achieved.

INFORMATION SHEET 3:
CLIMATE ACTION IN THE UK

How is the UK doing on cutting its emissions?

The UK's emissions have fallen by around 40% in the last three decades. Reductions in territorial emissions since 1990 have been achieved alongside GDP growth of approximately 70% over the same period. The UK has reduced its greenhouse gas emissions faster than any other G20 economy over the period 2008-2018. In the next three decades, emissions must fall by 100% (522 MtCO2e) to achieve the Net Zero goal.

What are the UK's climate goals and are we on track?

The UK has a legally-binding, domestic goal of achieving net zero carbon emissions by 2050. It has an interim 2030 climate goal that aims to achieve a 68 per cent emissions reduction by 2030, compared to 1990 levels.

However, at this current time, the UK is a long way off track to meeting this goal. A recent analysis showed that current government policy achieves just 26% of the emissions reductions needed to meet the UK's 2030 climate goals.

Furthermore, a recent WWF analysis showed that the climate change mitigation policies set out in the March 2021 Budget equate to just £145 million, while policies that will drive up emissions – like the fuel duty freeze – equate to over £40 billion. It is estimated that it would cost less than 1% of GDP per year to build a clean, safe, prosperous future for the UK, but climate change mitigation measures in the Budget added up to just 0.01% of GDP.

Why is the UK's climate targets especially important this year?

In November, the UK, in partnership with Italy, will be hosting an event which many experts believe to be the final and most crucial opportunity for world leaders to agree on how to combat runaway climate change. The 26th United Nations (UN) annual climate summit, known as COP26 (Conferences of Parties) takes place in Glasgow, and will bring together tens of thousands of negotiators, government representatives, businesses, and citizens for twelve days of talks.

COP26 is so important because it is the first time since signing the Paris Agreement in 2015 where countries are expected to update and raise ambitious on their domestic climate action plans and targets. It is a major milestone to ensuring that the goals of the Paris Agreement are met.

What are the most polluting sectors in the UK?

Not all sectors in the UK have reduced emissions at the same rate. Most emission reductions have taken place in the power, industry, and waste sectors. But these leave behind other sectors which have seen little or no change in emissions in the past decade. Transport emissions remain the same as levels in 1990 and are now the biggest source of emissions in the UK. Emissions from buildings account for 16 per cent of UK carbon emissions, having only fallen by 10 per cent since 2011, but at current levels are higher than in 2015. Emissions from agriculture also remain the same as 2008.

The following pages explore different sectors in the UK, the current situation and the ways in which Government can and must act to ensure net zero is reached by 2050.

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INFORMATION SHEET 4:

REDUCING EMISSIONS IN THE TRANSPORT SECTOR IN THE UK

The current situation

At current levels surface transport (cars, lorries, vans, buses, and trains) produce 25% of UK greenhouse gas (GHG) emissions. Emissions from surface transport has fallen by only 3% since 2008.

SOLUTION 1: ELECTRIC VEHICLES

Emissions from cars can be reduced significantly by shifting from petrol and diesel to electric vehicles (EVs). Currently there are 32 million cars in the UK, of which around 200,000 are fully electric. The UK's independent advisers on climate change recommends that if the UK is to meet its 2050 net zero target, all new vehicles should be electronically propelled by 2035 at the latest (and optimally by 2030).

However, although there has been a sharp uptake in purchasing of EVs, the current annual growth rate has levelled at 15%.

- **Challenge 1: the costs of electric vehicles:** EVs are currently on average a third more expensive than the petrol equivalent. However, it is expected that new battery electric cars will cost the same as equivalent new petrol and diesel cars at some point between 2025 and 2027 in Europe. Government can play a role in accelerating the point when new EVs are the same cost as new petrol and diesel cars by continuing to provide grants and tax breaks.

  Running costs are lower for electric vehicles, however. It is estimated that driving an electric car means up to £500 in reduced fuel costs each year over an internal combustion engine vehicle.

- **Challenge 2: perceived range a car can travel between charges, and the absence of a comprehensive charging network:** The number of charging points available, but especially those offering 'convenient access' will be an important part of the transition towards electrification of personal vehicles.

SOLUTION 2: MORE AND BETTER PUBLIC TRANSPORT AND WALKING AND CYCLING INFRASTRUCTURE

Whilst shifting to EVs will reduce emissions, most cars will still be petrol or diesel by 2030, so this means that reducing the total number of miles travelled by car is necessary to reach emission targets. To achieve this, investment is needed to provide safe cycle lanes and other cycling infrastructure, as well as convenient, affordable public transport.

The greatest potential shift from car usage to public transport is in large cities outside of London, The impact of improving public transport in these cities is sizable because they account for 18% of all UK car use and therefore the estimated reduction would account for a 2% reduction in overall UK-wide car use. Overall, 4% of car use across the whole of the UK could be reduced by improving public transport.

Cycling is mainly an alternative for short car journeys, under about five miles in areas outside cities (representing 75% of car use). Across the country, 14% of urban journeys under 5 miles are taken by public transport and 86% are taken by car. At the moment, the UK's proportion of miles travelled by bike is just 2%. This is under one fifth of the level in Germany and one twelfth the level in the Netherlands.

- **Challenge 1: improving public transport:** Re-organising bus services and adopting the Transport for London franchise system across the country would allow local authorities to set prices, timetables, and routes, to run integrated ticketing and ensure buses can be used for any journey. Further improvements to bus (and tram) services can be made by creating dedicated space for them on the roads thereby avoiding bus routes being impacted by traffic. Creating bus lanes or excluding cars from certain streets can improve public transport services and additionally bring about health benefits by reducing pollution.
- **Challenge 2: getting people out of their cars:** Introducing congestion charges and road pricing has successfully reduced car usage in many cities across the world, in the areas covered. It is estimated that by introducing such measures across cities in the UK, there could be a reduction of car usage by up to 1% in the UK. The introduction of the Congestion Charge in London 2003 coincided with a 20% decline in distance travelled by car drivers between 1999 and 2005. At the same time major improvements were made to public transport, in particular to the bus network, which will have had an effect as well.

Making cycling safer: there needs to be investment into a comprehensive network of separated cycle lanes. This would require an investment of approximately £10bn, but when capital costs are spread across a decade, it represents an annual cost of £2bn. This contrasts greatly with the annual roads budget which is around £11bn.

INFORMATION SHEET 5:

CUTTING EMISSIONS FROM HOMES IN THE UK

The current situation

Homes, offices, and buildings produce 27% of UK greenhouse gas emissions. Most homes (84%) are connected to the gas grid and heated by natural gas boilers. This must be transformed by shifting to low-carbon heating and hot water systems. Most emissions savings in the next decade will be from electric heat pumps and by upgrading buildings with insulation and other energy-saving measures.

SOLUTION 1: HEAT PUMPS

Heat pumps are predicted to become the main way to heat buildings in a low-carbon way. Acting like a reverse refrigerator, they take heat from the air and pump it into the building. Although powered by electricity, they produce far more heat for a given amount of electricity than any traditional electric heater. However, currently there are just 265,000 heat pumps in the UK, heating 1% of buildings. 25,000 heat pumps were installed last year which was 1.5% of the number of gas boilers installed.

- **Challenge 1: cost of heat pumps:** heat pumps currently cost more than natural gas boilers to install and therefore require government intervention in the form of grants and loans to help people install them. Typically, a heat pump is three times the price of a gas boiler, although running costs may be lower when combined with insulation. Therefore, to create a situation where heat pumps are the natural choice, government grants and loans need to be available to create a level playing field.
- **Challenge 2: installing enough heat pumps to meet climate targets.** it is estimated that existing homes will need to switch to low carbon heating at a rate of 20,000 every week between 2025 and 2050. Highly trained installers will be key in getting enough heat pumps in to meet our targets. Currently the number of UK heat pump installers are below the levels required. Government needs to fund a dedicated training programme to support training of heat pump installers.

SOLUTION 2: INSULATION

Bringing all homes up to a good level of energy efficiency by the 2030s is critical path to achieving our climate goals whilst reducing fuel poverty.

Improved energy efficiency in buildings since 2004 now saves the typical dual fuel household over £500 per year. Between 2004 and 2018, average household gas consumption fell 33% and electricity consumption fell 19%, despite a significant increase in the number of household appliances. These savings were driven substantially by energy efficiency improvements – including in lighting, appliances, heating systems and insulation. Further cost-effective investments in residential energy efficiency and low carbon heating over the next 20 years would reduce average household energy costs by £270 per year.

This can help to reduce the number of people who cannot afford to pay their energy bills- on average there are 9,700 deaths a year in the UK attributable to cold homes and 3,200 linked directly to fuel poverty. public transport is improved.

The impact of improving public transport in these cities is sizable because they account for 18% of all UK car use and therefore the estimated reduction would account for a 2% reduction in overall UK-wide car use. Overall, 4% of car use across the whole of the UK could be reduced by improving public transport.

INFORMATION SHEET 6:

REDUCING EMISSIONS FROM THE UK AVIATION SECTOR

The current situation

Aviation is the most climate harming mode of transport and before the pandemic, it was also the fastest growing source of greenhouse gases. Civil aviation emissions accounted for 5.9 % of all human-caused global heating in 2018. Half of this impact was caused by frequent flyers who represent just 1 % of the world's population. Meanwhile, more than 80 % of people around the world have never been on an aeroplane.

Before the pandemic, international flights were responsible for 7% of UK GHG emissions which has more than doubled since 1990, while domestic flights accounted for 0.5%. As government restrictions ease after the pandemic is over, emissions from flights are predicted to continue growing.

Unfortunately, it is unlikely there will be technology ready for commerical use in the next decade that can reduce emissions per mile flown, so the only way to reduce emissions from aviation in time for the UK's 2030 climate target is to reduce the number of miles flown.

SOLUTION 1: INCREASE AIRLINE TICKET PRICES WITH A TAX OR INCREASING PRICES THE MORE OR THE FURTHER SOMEONE FLIES

Research suggests that an across-the-board price rise of 10% of airlines tickets would lead to a fall in demand for air travel of 8.5%. A price rise of 20% would lead to a fall in demand of 17%.

However, only a relatively small proportion of UK society makes frequent use of air travel. It is estimated that only 15% of the population takes 70% of the flights, while 55% of the population took no flights abroad whatsoever in 2013. The frequent flier levy works by leaving the first flight untaxed but then applying a levy at a rising rate for each flight taken subsequently: a base rate on the second return flight, twice that rate on the third return flight, three times that rate on the fourth return flight, and so on.

- **Challenge 1: What about those employed in airports and for airlines?** Millions of people work in the aviation industry worldwide. Government must help to bring about a well-planned, clearly set out democratic transition for those who work in the aviation industry, by providing credible re-training opportunities, the creation of alternative employment opportunities, and providing protection to help employees during periods of transition.

INFORMATION SHEET 7:

REDUCING EMISSIONS FROM FOOD, FARMING AND LAND USE IN THE UK

The current situation

Farming and other ways land is used account for 13% of UK GHG emissions and has remained at this level since 2008. A large proportion of these emissions are produced by cows and sheep. Emissions from farming and land can be reduced by changing diets, adopting low carbon farming practices, and by planting trees, adopting rewilding techniques and protecting and restoring peatlands, saltmarshes, and hedgerows.

SOLUTION 1: REDUCING MEAT AND DAIRY CONSUMPTION

The population of the UK is expected to grow by 4% from now until 2030, so therefore without action to shift people towards a less carbon intensive diet, emissions from farming are likely to increase by 2030. For every 1% reduction in UK meat and dairy consumption, approximately 150,000 hectares of farmland in the UK can be released for other nature-positive purposes.

- **Challenge 1: How can we change people's diets?** Communication campaigns are effective at increasing awareness and can have some impact on behaviour. Evidence suggests that a strong campaign by government, supermarkets and food companies would effectively reduce dairy and meat consumption by 10%. A campaign would need to portray plant-based foods as a more attractive option, easy-to-cook, healthy, and to have climate benefits. A further step would require government to place a tax on meat and dairy products, from which the proceeds could be used to make meat-alternatives cheaper.

SOLUTION 2: MORE SUSTAINABLE FARMING TECHNIQUES

A less intensive approach to farming, like organic farming, can delivers a high level of emissions reduction alongside better outcomes for nature. This could include trees being planted on farmed land, improved hedgerow management and less and better use of synthetic fertilisers and pesticides.

- **Challenge 1: Supporting farmers to adopt new practices without loosing business:** Farmers need support in transitioning to sustainable farming practices without being undercut by produce from less environmentally-friendly areas. Farmers have cited a lack of access to capital and uncertainty as the biggest barriers to making environmental improvements. Government should guarantee agricultural payments for farmers until at least 2029 that are targeted at helping farmers transition to more sustainable land use.

SOLUTION 3: PLANTING TREES, REWILDING AND RESTORING AND PROTECTING PEATLANDS, SALTMARSHES AND HEDGEROWS.

Forests, swamps, peat bogs, salt marshes and seagrass beds all store carbon. Despite their potential to reduce global greenhouse gas emissions, these habitats are not being created, monitored and protected sufficiently in the UK, and indeed many of these habitats are in degraded condition and being allowed to worsen. Creation of new habitats, restoration, protection and improved management of natural habitats can enhance their carbon storage potential.

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INFORMATION SHEET 8:

REDUCING EMISSIONS FROM OTHER THINGS WE BUY IN THE UK

The current situation

Manufacturing and construction produce 19% of UK GHG emissions. Carbon emissions from industry are 52 per cent below their 1990 levels.

Emissions from waste (including from landfill, incineration, anaerobic digestion, wastewater treatment and composting) is responsible for six per cent of the UK's emissions. Emissions from waste have reduced by 63 per cent since 1990, mainly due to lower emissions from less biodegradable waste going to landfill. However, little progress has been made since 2014 as waste policy has stalled.

SOLUTION 1: CARBON TAX

A carbon tax works by making manufacturers pay for carbon they produce, thereby incentivising them to make their processes more carbon efficient.

- **Challenge 1: compensating consumers:** usually any additional costs of products are passed on to consumers who pay in the form of higher prices. One way the government can counter this outcome is by compensating consumers by making regular flat payments to everyone out of the proceeds of the tax, or at least to the less well off.
- **Challenge 2: making sure UK businesses are not undercut by businesses in countries without a carbon tax:** the Government needs to impose an equivalent carbon tariff on imports from foreign competitors who don't pay a carbon tax in their countries and would otherwise be getting an unfair advantage.

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