Aviva's response to BEIS Net Zero Review: Call for Evidence

27 October 2022

Summary

1. **The net zero transition presents significant opportunities for our business. Overall, we see the net zero transition as economically essential and a shift which is opening up new markets, products and opportunities for companies and consumers.**
    - The transition presents opportunities in new insurance offerings/markets - for example, our renewable infrastructure underwriting portfolio is now more than 150% of the size of the fossil fuel power generation book we exited in 2019.
    - By building responsibility into all our investment processes we improve our risk management and investment performance, while at the same time help to create more sustainable investment solutions fit for the future.
    - Our approach to climate action has become a differentiator for us as a company with clients, customers & employees.

2. **There are challenges, but without the net zero transition climate change poses a fundamental threat to our business**.
    - For the insurance business model to survive, and products it delivers to consumers, climate change must be addressed. In any increasing warming scenario – 1.5°C-4°C and beyond – some risks are going to be unaffordable for many to insure against and ultimately, some risks will just become uninsurable. And when that happens, insurance will cease to have a purpose.
    - As an asset owner and manager, our modelling shows that in the current business as usual scenario extreme physical risk will negatively impact long-term investment returns on equities, corporate bonds, real estate, real estate loans and sovereign exposures.

3. **Firms cannot solve the climate crisis alone. We need a supportive and holistic policy environment that is needed to underpin change on this scale, including:**
    - A Net Zero Investment Plan for green growth
    - A UK economy-wide net zero transition plan
    - Policy incentives for transition solutions
    - Reform of the International Financial Architecture
    - See questions 6-10 for more information

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Aviva's net zero goals

We have an opportunity to use insurance and investments as an enabler of real change in the real economy, to improve resilience and drive decarbonisation – and as a responsible fiduciary of our clients capital & premiums we believe that we can help accelerate the global move towards a net zero economy.

That's what underpins our plan to become a Net Zero company by 2040:

- We will achieve net zero across our scope 1 and 2 and supply chain by 2030
- We will achieve net zero across our investments and insurance (including scope 3) by 2040
- By 2025, we plan to cut the carbon intensity of our investments by 25%.
- And by 2030, we plan to cut the carbon intensity of our investments by 60%. That's ahead of the Paris aligned target of 50% cuts by 2030.
- We are setting Science-Based Targets aligned to a 1.5 degree pathway for our operations, supply chain and investments, and our climate goals will be delivered in a way that contributes to tackling the related challenges on biodiversity and nature.

1. What growth benefits/opportunities have you had, or do you envisage having, from the net zero transition?

The net zero transition presents significant opportunities across our business. Overall, we see the net zero transition as economically essential and a shift which is opening up new markets, products and opportunities for companies and consumers.

We have an opportunity to use insurance as an enabler of real change in the real economy, to improve resilience and drive decarbonisation – and as a responsible steward of our client's capital and premiums we believe that we can help accelerate the global move towards a net zero economy.

The required speed and scale of net zero transition is well known through all related climate science. Addressing the net zero transition as urgently as the science requires opens up a major opportunity for the UK to be at the forefront of the global economic transformation. Moving too slow we risk being left behind economically, alongside the associated and serious physical, economic and societal risks.

Customer, client and employee engagement

Our approach to climate action is a differentiator for us as a company with clients, customers & employees. In recent years there's been a shift from climate being something we were asking clients and customers about, to something they come to us about. Harnessing that competitiveness to drive standards up will be really powerful. This growing interest and expectations in both Environmental, Social and Governance (ESG) factors and net zero presents us with many opportunities; new customers, higher customer retention, employee satisfaction and retention, and the development of new products and services to meet this growing market. See Q2 for further details on shifting customer and client expectations on ESG and net zero.

Opportunities in insurance

The net zero transition presents many new and evolving opportunities for our business including the opportunity to develop products for new and growing technologies and markets. Analysis conducted by BCG indicates that the size of the UK general insurance market could increase by up to £20bn due to replacement of existing insured assets with low carbon assets (such as EVs and low carbon properties), and only £4bn of the market would be lost through the gradual decline of certain industrial activities.

We want to make it easy for customers to make climate friendly choices and support people as the economy changes, which is why we've developed products that enable and drive the net zero transition. At last count we offered over 30 green products:

- **Renewable energy**: Three years ago, we stopped insuring standalone operational fossil fuel power and replaced it with a renewable energy offering. Our renewable portfolio is now more than 150% of the size of the fossil fuel power generation book we exited[1]. We underwrite renewable energy projects on all six continents. Most recently we have begun to write renewable energy project from our Irish and Canadian business generating £346m Gross Written Premiums in Q3 2022 (see case study below).
- **Electric vehicles (EVs) and charging points**: We have introduced bespoke electric vehicle policies in Canada and have updated our UK motor insurance products to add new features for EVs. The share of EVs we insure is growing, and we are overweight in our market share. In addition, we're one of the first insurers in the UK to launch a standalone insurance product covering EV charging points (see case study below).
- **Home insurance**: In the UK, unlike with many other insurers, solar panels on residential roofs, and heat-pumps attract no additional premium for Aviva customers.
- **Sustainable claims**: When paying out claims, we also have the opportunity to reduce environmental impact through repair and restoration where possible.

Opportunities in investments

Research by Boston Consulting Group, commissioned by the ABI, showed that ABI members could invest up to £900 billion in the UK's Net Zero transition; this could make up one-third of the total institutional investment required to meet the UK's target of a 78% reduction in emissions by 2035[2].

Investing responsibly is in the best interests of our customers and our shareholders. By building responsibility into all our investment processes we aim to improve our risk management and investment performance, while at the same time help to create more sustainable investment solutions fit for the future. We do not do it at a cost to investors – we intend to do it in a way that maximises the positive returns for them.

The financial sector's role in the economy means that as investors we can support the drive to a net zero economy. Net zero represents both a business continuity imperative and a growth opportunity. Aviva Investors has taken a proactive, responsible investment approach since the 1970s. The UK's commitment to net zero has accelerated the interest and demand in this area from our clients in recent years.

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[1] Aviva plc, Aviva powers up renewable energy insurance as it taps into net zero commitments, 2022
[2] Association of British Insurers, ABI Climate Change Roadmap, 2022

As responsible and active investors we have a crucial role supporting the net zero transition. This is done by investing in technologies and companies aligned to net zero as well as using our position as investors to help transition polluting assets to being greener (see case study on engagement on climate below). Investments in net zero supporting products and technologies include onshore and offshore wind, rooftop solar, energy efficient buildings, low-carbon public transport, nature-based solutions for carbon sequestration. Examples across Aviva Investors and our annuities business include:

- **Renewable energy**: This is one of the sectors offering greatest long-term relative value as investors. We now have over £2.5 billion invested in renewable energy and its associated infrastructure.
    - In 2018 Aviva Investors invested £400 million towards the construction of Hornsea One, the world's largest offshore windfarm situated in the North Sea, which generates enough electricity to supply over one million UK homes.
    - In 2020 Aviva Investors provided financing towards the acquisition of the Galloper Wind Farm offshore transmission operator assets, which can produce enough energy to power 380,000 homes in the UK.
    - In 2021 Aviva Investors acquired a portfolio of 2,939 rooftop solar panels and two ground-mounted solar installations. These have an installed capacity of 12.6MW, the equivalent of meeting the energy demands of 13,500 local homes per year.
- **Waste to energy**: We invested over £350m in the UK waste-to-energy sector, recognising that efficient recycling and responsible transformation of waste plays a key role in protecting the environment, with significant technological developments anticipated in the near future.
- **EV infrastructure**: We're investing £110m in EV infrastructure through equity and roll out across our real estate as part of our Climate Transition Strategy.
- **Real estate:** As of May 2022, we have originated £1.04 billion in climate transition-focused real estate loans, surpassing our 2025 target of £1bn three years early.
- **Transport**: We made a further private investment in the UK rail sector, where we now have over £3 billion invested.
- **Ports:** We provided innovative financing to Associated British Ports (ABP) with a sustainability-linked interest rate 'swap repack' which we believe to be the first of its kind. ABP is the owner of 21 UK ports and handles around 25% of the UK's seaborne trade. The performance targets on the 30-year transaction include a significant reduction in greenhouse gas emissions.
- **Sustainable transition fund range:** since 2019 Aviva Investors has created a range of funds which are underpinned by the UN Sustainable Development Goals. **The climate related funds** identify and invest in companies offering goods and services for climate change mitigation and those positively aligning to and orientating their business models to be resilient in a warmer climate and a low carbon economy. The **fund focused on natural capital** invests in companies that provide solutions and are transitioning their business models across the themes of sustainable land, sustainable oceans, the circular economy and climate change.[3]

[3] Aviva Investors, Aviva Investors expands sustainable transition range with launch of Social Transition and Natural Capital Transition funds; Aviva Investors expands Climate Transition range with launch of Climate Transition Real Assets Fund, 2021

- **Nature-based solutions:** Aviva Investors offer direct investment in nature-based solutions alongside real estate and infrastructure, as part of a real assets climate transition fund – one of the first of its kind in the industry. The first direct investment was 6,300 hectares of Scottish moorland in the Glen Dye area of West Aberdeenshire. In partnership with Par Equity, a Scottish-based forestry investment fund manager, over 3,000 hectares of land will be newly planted, and 1,800 hectares of peatlands restored. An estimated 1.4 million tonnes of carbon will be sequestered over the lifetime of the project, which will also provide employment for the local community in future timber production.

The risk of inaction

Aside from the clear opportunities that the net zero transition presents to our business, it is also important to note the significant risks presented by inaction. The net zero transition is essential for business continuity in our industry.

For the insurance business model to survive, and products it delivers to consumers, climate change must be addressed. In any increasing warming scenario – 1.5°C-4°C and beyond – some risks are going to be unaffordable for many to insure against and ultimately, some risks will just become uninsurable. And when that happens, insurance will cease to have a purpose.[4]

As an asset owner and manager, our modelling shows that in a 4 degree scenario extreme physical risk will negatively impact long-term investment returns on equities, corporate bonds, real estate, real estate loans and sovereign exposures.

The economic effects of climate change on people's lives are apparent within our business. In February 2020, Aviva received almost a year's worth of storm claims in a month[5]. Unchecked climate change means, our business model and the security that underpins people's homes, healthcare, pensions will be destroyed. Avoiding that is what underpins our plan to become a net zero company by 2040.

Historical costs and production of key energy supply technologies

From empirically grounded technology forecasts and the energy transition – see footnote 2

Research by the Institute for New Economic Thinking at Oxford has shown that most energy-economy models have historically underestimated deployment rates for renewable energy and overestimated the costs. Renewable energy costs have fallen over recent decades – shown in figure 1 – while data shows that the International Energy Agency and Integrated Assessment Models, which inform the IPCC, have consistently projected higher costs than the trend experienced. Figure 2 uses solar PV as an example and, taking 2010-2020 as a snapshot, shows that costs fell by 15% per year – but had been predicted in a range up to 6%. Therefore, this research concludes, a quick, renewable energy transition will likely lead to overall net savings of many trillions of dollars – before even considering climate policy related benefits.

Figure 1

[4] Aviva plc, Climate-related financial disclosure, 2022
[5] Aviva plc, UK weather update: Storm Ciara and Storm Dennis, 2020

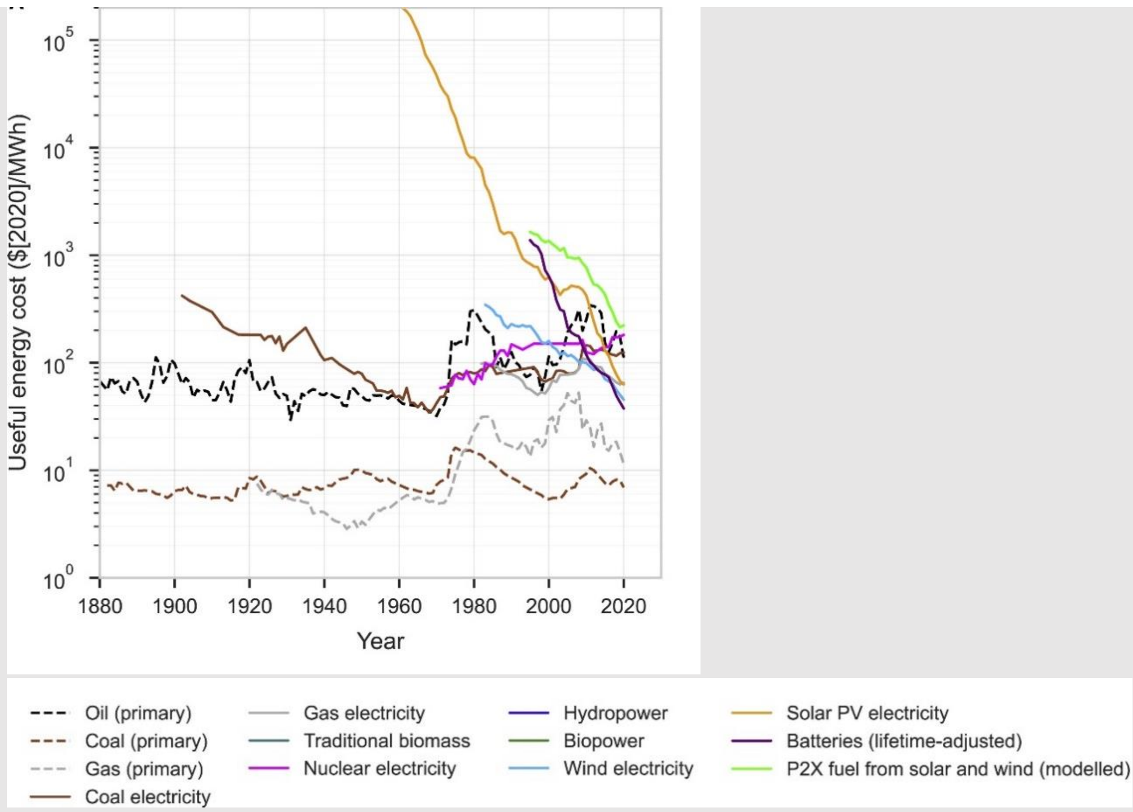
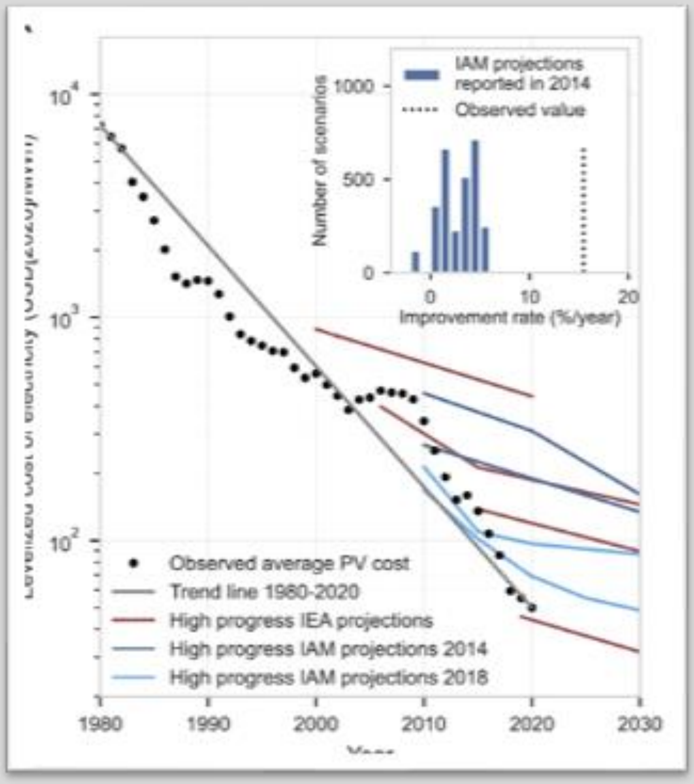

Useful energy cost ($[2020]/MWh)
10^0
10^1
10^2
10^3
10^4
10^5
1880 1900 1920 1940 1960 1980 2000 2020
Year
Oil (primary)
Coal (primary)
Gas (primary)
Coal electricity
Gas electricity
Traditional biomass
Nuclear electricity
Hydropower
Biopower
Wind electricity
Solar PV electricity
Batteries (lifetime-adjusted)
P2X fuel from solar and wind (modelled)

Figure 2


10^2
10^3
10^4
1980 1990 2000 2010 2020 2030
Observed average PV cost
Trend line 1980-2020
High progress IEA projections
High progress IAM projections 2014
High progress IAM projections 2018
IAM projections reported in 2014
Observed value
Number of scenarios
0
500
1000
0 10 20
Improvement rate (%/year)

Case Study: Renewable Energy Generation

Our long-term support to renewable energy generation continues to help all aspects of our business to align to net zero – operations, supply chain, underwriting and investment.

We have been purchasing renewable electricity for our own UK operations since 2004 and this has grown to cover 88% of our business worldwide.

We have also been generating renewable electricity onsite for a number of years, leading with solar carports, as well as on roof solar. Very recently, Aviva's Pitheavlis site in Perth has taken a significant step towards achieving net zero operations following preliminary approval to install a wind turbine that will provide renewable energy for the site. The 77 metre turbine, when combined with existing solar and battery technology, will meet 100% of Pitheavlis electricity demand through renewable energy. The turbine, scheduled to be operational by the end of 2023, will generate up to 58.2m kWh over 25 years delivering an annual carbon emission saving of 386 tonnes. This is equivalent to the electricity required to power over 680 homes per year.

Aviva Insurance is supporting renewable energy generation, both in the UK and across the world. From solar farms to floating arrays, from Australia to Bedfordshire, Lightsource BP is ramping up its renewable energy push. It will be present in 20 countries by the end of the year – and has just pushed the button on its largest UK project to date. Construction will begin at the vast Tiln Farm development in Nottinghamshire next month. When complete, it will have a maximum output of 61 megawatts of power. Aviva is the lead insurer on the Lightsource-BP UK Solar portfolio. We're also lead insurer for the Tiln Farm Solar PV construction. We are developing further standalone covers for other renewable technologies in the near future.

Within our investment arm, Aviva Investors, we have implemented several sustainability-linked leases that have successfully embedded sustainable KPIs as well as commercial incentives within the lease structure. One example of this is of a £3 million photovoltaic panel (PVs) installation at Next PLC's Distribution Centre, South Elmsall, Yorkshire. The solar project will facilitate a renewable energy supply for on-site consumption by Next and help advance Aviva Investors' net zero commitments. The project involves the installation of a 2,400 kWp system which is expected to generate over 2,100,000 kWh of clean energy each year and offset an estimated 447,300 kg of carbon dioxide (CO_2) per year. [6]

Case Study: Route to Net Zero EV Chargers

We're one of the first insurers in the UK to launch a standalone insurance product covering EV charging points. The cover addresses requests from brokers on behalf of their customers including contractors, car park operators, local authorities, asset managers and forecourt operators, providing cover for everything from a single charger to an entire network. There are currently more than 940,000 plug-in cars registered in the UK. The sale of new cars and vans with petrol and diesel engines is set to be banned from 2030, and the government has set a target to increase the

[6] Aviva Investors, Aviva Investors and Next PLC support green transition with photovoltaic panel installation, 2021

number of public charging points to at least 300,000 by the same date in a bid to boost the take-up of EVs.

At the same time Aviva's investment arm, Aviva Investors, is investing up to £110 million from its Real Assets Climate Transition Fund in Connected Kerb (an EV charging infrastructure company) to support nationwide delivery of EV charging infrastructure. The investment will support Connected Kerb's plans to deliver 190,000 on-street EV chargers by 2030, and corresponds to almost one-third of all funding committed by public policy initiatives to-date.

Case Study: Aviva Investors' Engagement on Climate

As an active owner with scale and global reach, we also have the opportunity to use engagement with a company, shareholder voting and investment decisions to drive a transition to a sustainable future. In doing so, we can help to transition more polluting assets which is vital to meet emission targets and to avoid stranded assets.

Aviva Investors' ESG philosophy promotes the relative merits of engagement over divestment as the more effective mechanism of delivering positive change and outcomes for our clients and society. Engagement provides us the opportunity to partner with companies as they navigate the challenges of transition.

In practice this means that in 2022, the focus of our company engagement as an investor is climate change, biodiversity, human rights and executive pay. Our climate priorities for investee companies are that companies create a transition plan aligned with the Paris emissions reduction targets, embed net zero into corporate strategy, include just transition considerations, have quantifiable performance indicators, are transparent about risk and dependencies such as reliance on technologies and in their wider reporting include climate accounting.

For this approach to have an impact on company transition, it must be accompanied by a robust escalation process, including the ultimate sanction of divestment. Since 2021 the investments we hold in 30 systemically important carbon emitters have been subject to our 'Climate Engagement Escalation Programme'. This Programme includes companies from the oil and gas, metals and mining and utilities sectors that substantially contribute to total global carbon emissions. The stipulations of the Programme include the adoption of science-based targets covering the full carbon footprint of the businesses, the reframing of corporate strategies, business plans and capital frameworks, adjustments to management incentives and lobbying activities.

Progress is monitored and escalation, if necessary, could include votes against directors, the filing of shareholder proposals, and working with aligned stakeholder groups to apply further pressure. Companies that fail to make sufficient progress at the conclusion of the three-year programme will trigger full divestment across Aviva Investors' equity and credit portfolios.

While acknowledging we are in the early stages of a long journey, there were a number of positive outcomes during 2021 that have given us cause for optimism. As of the end of 2021, we had conducted 120+ engagements across the focus group and secured 94 wins across five programme asks, particularly with respect to the formalisation of public climate commitments, progress on board governance and climate reporting.

2. What impacts have changing consumer choices/demand had on your business?

According to the ABI, there is a growing evidence base that the majority of consumers want their insurance and long-term savings providers to offer more sustainable choices. Climate action failure, extreme weather events, and biodiversity loss and ecosystem collapse were considered the top three of the top 10 global risks by severity over the next 10 years in the annual Global Risks Perception Survey (GRPS)[7]. According to a UK consumer concerns survey (undertaken on the IPSOS Omnibus survey between 29th and 31st July 2022), 46% of consumers think climate change is a key global concern, ranking #1 compared to other issues. This has increased from 19% of consumers in 2016 who thought it was a key concern.

As responsible investors we have seen the demand for sustainable products and strategies grow dramatically. In 2021, 57% of new business value workplace wins have been influenced by ESG considerations, by H1 2022 this had grown to 81%.

However we do recognise that in recent months the sector has experienced some backlash against ESG investing. Our experience of this industry-wide ESG backlash demonstrates the overall complexity of transitioning a whole system to net zero and the importance at market and product level of clear labelling and regulation. Greenwashing must be called out: regulators and investors have an important role to play in doing so. As an investor we are clear on the merits and limits to ESG. It enriches the investment process, encourages longer-term thinking, helps drive positive change in issuers and helps clients align investments with their sustainability preferences. In parallel, we are equally clear that 'good ESG' companies will not always outperform, ESG is not an objective science or tells the whole story of a company. Crucially ESG cannot remedy sustainability-linked market failures – policy and regulation is required for that. These challenges are a case study of the benefits and limits of transitioning individual products or markets to net zero, within an overall system that does not currently properly price unsustainable behaviours[8]. Please see Q7 for more information.

3. Do you foresee a role for your business within an expanded UK supply of heat pumps, energy efficiency, electric vehicles, hydrogen economy or clean power?

Yes, we believe we have a key role in investing in and enabling the transition of these technologies. The majority of the estimated £50-60 billion of increased annual investment needed for the UK government's Net Zero Strategy over the next ten years is expected to come from the private

[7] WEF, The Global Risks Report, 2022
[8] Aviva Investors, Green is not always clean, 2021; Reframe and reclaim, 2022

sector.[9] As responsible investors we have a crucial role supporting the net zero transition by investing in technologies and companies driving this transition, and helping to transition polluting assets towards being greener assets using our position as investors to support companies and countries transition to net zero (see Q1 for additional information). Where investment is required in sectors that involve early-stage technology or in markets where there is no defined demand financial investors will need to work collectively with industrial sponsors and the government to transform these markets from early-stage to mature technologies.[10] And as an insurer, we can offer (and in many cases already are – see Q1) products to meet the growing market, and incentivise and support the uptake of these sustainable solutions and technologies - for example provision of product liability cover for new technology role out.

4. What barriers do you face in decarbonising your business and its operations?

Operations

- **No effective replacement for gas**. Gas remains the primary heat source for commercial buildings. Although there are alternatives such as heat pumps, technology has not fully enabled their use in large-scale commercial applications where the size of installation can be an issue and running costs (electricity) prohibitive. Aviva are working with a number of organisations to understand the most likely successor to gas heating and are prepared to offer trial opportunities if helpful to development of the technology.
- **Lack of low carbon alternatives for long haul business travel** and for short haul travel, flying is often cheaper than trains. We help the decision making process here by comparing the relative carbon emission and time factors when booking. Sustainable Aviation Fuel (SAF) may be an option to reduce emissions from business flights; however there is no clear standard here with the private sector taking the lead.
- **Lack of guidance and support for SMEs** (within our supply chain) to deliver net zero. There is a significant challenge for all companies in calculating and reporting their emissions (particularly scope 3), and this is particularly relevant for many SMEs who may have limited climate expertise and resource. As such supply chain emissions data is difficult to collect and it can be challenging to drive climate action across this group of stakeholders. Support is needed to help SMEs to assess and reduce their emissions.

Investments

- **Lack of net zero plan, policies and incentives**. As a business we have a clear, ambitious net zero goal to be achieved by 2040. This relies on an enabling policy environment that's supporting an economy-wide transition. For example, as an investor with positions across the global economy our scope 3 emissions reflect the industrial make up of each company and wider economy. To successfully achieve our emissions goals (our plan to cut carbon intensity of our investments by 25% by 2025 and 60% by 2030), comprehensive and swift government action is needed to drive the transition. The lack of clear and loud price signals is a significant barrier – for example, ongoing subsidies for fossil fuels, no clear

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[9] UK Department for Business, Energy & Industrial Strategy, Net Zero Strategy: Build Back Greener, 2021
[10] Aviva Investors, An investor's perspective on the UK's Net Zero Strategy, 2021
https://www.avivainvestors.com/en-gb/views/aiq-investment-thinking/2021/10/uk-net-zero/

phase out dates for unsustainable emissions sources like coal power stations and the lack of a carbon price. Please see Q6, 7 and 10 for more information.
- **Lack of data and agreed methodologies to measure financed emissions**. While there is significant ambition across the sector to do so, the methodologies do not yet exist to measure and set reduction pathways for the emissions of certain asset classes and financial activities. There is significant progress being made on this by organisations like Partnership for Carbon Accounting Financials (PCAF) and the Science Based Targets Initiative (SBTi) alongside industry groups such as the Net Zero Asset Owner Alliance (NZAOA). However there are still gaps that must be filled in order to get a fuller picture of investment/financed emissions.
- **Conflicting scenarios and pathways to net zero**. There are many different scenarios adopted by the sector, many of which map out different pathways to net zero across different sectors. Integrated Assessment Models used by IEA, IPCC, NGFS have incorrect assumptions about cost decline and deployment rates for renewable energy (set out in more detail in question 1, figure 1 and 2).
- **The lack of carbon pricing initiatives** with sufficient coverage and price is slowing the pace and scale of the net zero transition required. A higher and more expansive carbon pricing scheme would provide a broad incentive for emissions reduction, at the same time we acknowledge that rising energy prices create difficult context for increasing these measures at this time. Please see Q7 for more information.

Insurance

- **Lack of data and methodologies to measure and report on "insured emissions"**. To address this, we have been actively collaborating to develop standards with PCAF and the NZIA (Net Zero Insurance Alliance). The guidance on insurer attributed emissions and target setting will be published in the coming months. Data availability varies across our portfolio, however, we do not see this as a barrier to start measuring our insured emissions and creating targets where data or proxies exist.
- **Need for greater education amongst SME** businesses who in the main are not focused on climate change/emissions issues, and may not have the tools/resources to adopt climate goals and initiatives within their businesses.
- **Need to incentivise longer term thinking** within businesses to help inform their investment decisions.
- **Need for robust building codes and standards** to enable insurance of low carbon materials/techniques, to ensure that asset protection is a consideration alongside life safety.

Carbon removals

- The carbon removals market needs **stronger governance and standards** to ensure business investments are delivering the intended results.
- We will need a significant scale up in both nature-based and 'engineered' carbon removal solutions in order to provide the scale of carbon removals required by UK businesses.

5. What challenges/impacts has the net zero transition presented to your business?

As a business we are honest about the scale of the challenge of transitioning to net zero and its complexity. We set out net zero goals on a best-efforts basis and are committed to being transparent about our progress, highlight where we fall short and – wherever this may be the case – set out the reasons why, so that we can be held to account.

As part of the transition, new data, frameworks and analyses needed to be incorporated into the business strategy. Although that posed challenges and remains an important area on which to focus, it has also helped us identify important risks for our business and has helped us become more resilient.

Another challenge is that, as investors, we depend on the real economy to deliver their decarbonisation goals for us to be able to meet our targets. Therefore, a key challenge has been the need to develop and deliver a robust framework to hold corporations and sovereigns accountable for delivering their share of GHG emission reduction.

The greatest challenge to delivering the transition is where government policies or regulation are not driving the economy towards that goal, so we will continue to encourage governments around the world to introduce these measures.

While there are challenges associated with the net zero transition, there are even more significant challenges that come with inaction. The net zero transition is essential for business continuity in our industry. For the insurance business model to survive, and products it delivers to consumers, climate change must be addressed.

6. What opportunities are there for new/amended measures to stimulate or facilitate the transition to net zero in a way that is pro-growth and/or pro-business?

What's worked?

- **Certainty**: The UK's 2050 net zero law gave business a really useful, clear framework – you can see from the corporate response it catalysed. A clear enabling environment from government drives investment from finance and innovation from business.
- **Collaboration between business and government**: The issues being addressed are hugely complex and government, business and civil society can do more when they work together, than on their own. The Taskforce for Climate-related Financial Disclosure (TCFD), Glasgow Financial Alliance for Net-Zero (GFANZ) and the UK Transition Plan Taskforce are powerful examples of this and represented big steps forward when launched. This approach is going to be essential to address the challenges inherent in the net zero transition.

What do we need?

We need a supportive and holistic policy environment that is needed to underpin change on this scale. Firms cannot solve the climate crisis alone. Our net zero ambitions are made "in the expectation that governments will follow through on their own commitments to ensure the objectives of the Paris Agreement are met" (NZAOA[11] and Net Zero Asset Managers Initiative[12] commitment language). Please note we have detailed proposals covering the points below which we'd be happy to share.

A Net Zero Investment Plan for green growth[13] (see Q10 for further details)

- A Net Zero Investment Plan is urgently needed to catalyse private finance to deliver green growth. It should set out how government will align policy, regulation, and strategic public spending to signal a clear pathway to a net zero, nature positive economy.
- It should set out a comprehensive financing strategy to assess, track, and scale-up (largely) private finance in the net zero transition, consistent with the Paris Agreement, while delivering wider benefits such as improved energy security and alleviating the rising cost of living.
- This system-wide and sector-tailored approach aims to provide a bridge between the economic opportunities that exist within the real economy and the supply of net zero finance from the UK's global financial centre. The right policy environment could make £900bn of insurance and pension investment available for green financing in the UK, substantially reducing the amount of public spending needed to deliver net zero. Please see Q10 and our WWF-Aviva position paper '[A UK Net Zero Investment Plan for Green Growth]' for more information.

A UK economy-wide net zero transition plan[14] (see Q10 for further details)

- The Government should produce a plan to deliver the emissions reductions necessary to align with the Climate Change Committee's (CCC) carbon budget for the following five-year period. This plan should contain firm sectoral emissions pathways, and outline which departments are expected to deliver them via departmental net zero transition plans. The plan should also include content outside of the CCC's remit, for example overseas investment.
- Ambition should be ratchetted up over time in line with the science, with a clear commitment to update and revisit the plan biannually. The plan should include sections on key real economy policy areas and financial sector.
- This would send a powerful and clear signal to the market, helping to support investment in UK businesses aligning their strategy to the net zero transition and those businesses providing the solutions that the transition will require – in turn helping the UK to secure the economic benefits that the net zero transition will offer.
- Please see our WWF-Aviva position paper 'Aligning the UK Financial System to Net Zero' for more information.

Policy incentives for transition solutions

[11] Net Zero Asset Owner Alliance, Commitment Document for Participating Asset Owners, 2022
[12] Net Zero Asset Managers Initiative, The Net Zero Asset Managers Commitment, 2022
[13] Aviva and WWF, A Net Zero Investment Plan for Green Growth, 2022
[14] Aviva and WWF, Aligning the UK Financial System to Net Zero, 2022

- In the face of political challenges to agree meaningful action on global carbon pricing, policy measures to incentivise investment in low carbon infrastructure and solutions are also vital. Both are needed to drive the transition at the pace and scale needed. Key examples are the US Inflation Reduction Act – injecting $369 billion into the US clean energy economy, described as a "game changer for the key power and EV sectors in the US by BloombergNEF[15] and policies to agree phase out of internal combustion engine vehicles by 2030-35 which have seen the autos sector dramatically pivot towards electric vehicles. All sectors – including high-emitted sectors such as energy, industry and real estate - need clear policy frameworks and incentives to transition to net zero.

UK on the world stage

- The UK's ambition to be the first net zero financial centre was a very welcome one – from the then Chancellor Rishi Sunak at COP26. Achieving this will not be possible with corporate commitments alone; it requires regulatory and policy innovation.
- To date the institutions which oversee and regulate global finance have focused climate change work on disclosing managing transition risk – important as this is, it's not sufficient to support and drive the net zero transition.
- Given how key private finance is to the delivery of net zero it's vital that these institutions – the international financial architecture that has built up over decades – are reformed to help support the transition. The UK has led efforts in this arena through the COP Presidency and the next step should be working with other G20 member states and interested G77 members on the reforms needed, inviting proposals and ideas for reform. Convening a summit to agree and implement the necessary reforms could be timely as the 80th anniversary of the original Bretton Woods conference comes around in 2024.

7. What more could be done to support your business and/or sector to decarbonise?

Harnessing financial markets through the reform of the International Financial Architecture

- At present, the regulation and supervision of UK financial institutions is often developed at the multilateral level, which then has significant influence on national level supervision and regulation. The focus to date has been on climate change as a financial stability issue (though with a primary focus on transition risk in the short and medium term rather than the potential for disruptive or even destructive physical impacts in the medium to long term) and on disclosure and risk management rather than shifting the system to place consideration of climate change at the heart of every financial decision (as set out by Mark Carney).
- We propose that the UK advocate for each institution or organisation to produce and report annually upon a transition plan (or roadmap) for its work, and that an overall "state of the transition" be assessed and reported on each year with recommendations for further necessary work or recommendations to governments for enabling policy reform. We believe that these plans or roadmaps will evidence the need for mandate reform and repurposing so that instead of waiting for the next crisis and restructuring in its wake (as

[15] BloombergNEF, US Climate Bill Changes the Game for Two Key Sectors, 2022

has happened repeatedly since the current financial system was outlined through the creation of the Bretton Woods institutions in 1944) the International Financial Architecture needs to be repurposed to support tackling and managing the crisis of this century – climate.

Relentless focus from the G7 & G20 on increasing ambition and robust delivery

- Currently, the majority of countries are committed to net zero in some form, with many, like the UK, setting a 2050 target; some, like Germany (2045), with a slightly earlier target, and some later (China 2060, India 2070). The nature of systemic transitions is that they follow an s-curve pattern, with early progress being slow, then accelerating to be exponential until the transition tails off leaving only laggards to catch up. Evidence has been that when capital and expertise are committed to targets, they can be exceeded.
- Evidence is that this is happening in some cases with net zero. There is plausible hope that when big economies set the right policy conditions to incentivise transition, it may happen faster than any anticipate, which will give space for net zero targets to move earlier. The private sector can create headroom for governments to improve their targets and delivery through their own decarbonisation, and setting earlier targets creates more policy certainty to incentive further innovation, creating a positive reinforcing feedback loop. For an entity like Aviva, whose prudential regulation incentivises significant investment in UK gilts and other sovereign bonds, the need for government targets to be enhanced to allow the 2040 commitment to be met is important, likely alongside increased issuance and investment in green gilts.

Greater transparency and clarity of transition in real economy sectors

- The UK's leadership on transition plans and mandating Taskforce for Carbon-related Financial Disclosures (TCFD) is very welcome. For financial institutions to align portfolios and underwriting decisions with net zero – helping to finance the transition or transition polluting assets – requires information from the real economy, not only about current status, targets, governance and risks (in a company TCFD report) but also about strategy to pivot business to be viable and thrive in the transition and the net zero economy. TCFD reports and transition plans need to be put to the vote by investors and need to be central to business planning, strategy and incentives (such as senior executive remuneration).

New role for Regulator

- We suggest that the government introduces a new statutory objective requiring the regulators to facilitate the alignment of the financial services sector with net zero including wider considerations of nature.
- A statutory objective on climate would empower regulators to actively advance the innovative climate polices needed to facilitate the transition to net zero. This would complement and strengthen their existing policy commitments (UK taxonomy, climate-related disclosures) but also instigate further actions by regulators, such as:
    - Greater supervisory and macro-prudential measures to prevent build-up of systemic risks to the financial system.
    - Exercising rule-making powers to ensure that financial institutions do not continue supporting activities that undermine climate, nature and broader sustainability objectives and have a credible transition plan for getting to net zero.

    - Better enable accompanying sanctions for non-compliance, given the rising prevalence of greenwashing.

Create a mechanism for finance professionals to be able to raise challenges and address tensions that arise between market integrity and net zero commitments

- Transitioning an entire economy and finance system has never been done before. It will inevitably throw up a whole range of challenges to understand and address. All financial institutions have a role in maintaining the integrity of the markets in which they operate, and the FCA handbook includes a positive duty to act in the best interest of the integrity of the market and manage risks to market integrity. Doing so will increasingly require an acknowledgement of where competing duties exist because although we believe over the long term the financial interests of our shareholders and clients are aligned with net zero, there will be instances where long- and short-term needs are in tension.
- Our recommendation would be for finance professionals, such as fund managers, to be able to raise these clashes with the regulator so they can be addressed. This could be done through the transition plan process, which the UK government is leading on by convening the Transition Plan Taskforce to prepare guidance for mandatory transition plans.

Carbon pricing / internalising environmental costs

- The lack of carbon pricing initiatives with sufficient coverage and price is slowing the pace and scale of the net zero transition required. As a member of the NZAOA, the UN-convened group of institutional investors committed to transitioning their investment portfolios to net zero by 2050, we have called for governmental carbon pricing[16]. This would provide a broad incentive for emissions reduction, at the same time we acknowledge that rising energy prices create difficult context for increasing these measures at this time. The principles required for Paris-aligned carbon pricing set out by NZAOA are:
    - Ensuring appropriate coverage and ambition
    - Delivering a just transition
    - Providing a predictable price signal
    - Minimising competitive disruptions
    - Promoting international cooperation

8. Where and in what areas of policy focus could net zero be achieved in a more economically efficient manner?

- **Building energy efficiency**: Support for home energy efficiency improvements and requirements for new homes and commercial buildings to be low or zero carbon would reduce our energy need and reliance on fossil fuels, which is particularly important at a time of high energy prices.
- **Protecting nature**: Protecting and enhancing our forests, peatland, wetland, seagrass and other green / marine areas is an efficient way to support the net zero agenda and

[16] Net-Zero Asset Owner Alliance, Net-Zero Asset Owner Alliance Position Paper on Governmental Carbon Pricing, 2022

also deliver across other commitments of the government (e.g. halt and reverse biodiversity loss by 2030, and tackle deforestation).

- **Low-carbon technologies**: Supporting technologies that reduce emissions (as opposed to looking to remove emissions once produced) will provide a more efficient means to achieve net zero.
- **Resilience**: As we are already experiencing the physical affects of climate change we must ensure that adaptation and resilience are taken into account in all new (and existing) infrastructure, energy, real estate, transport, and other assets.

9. How should we balance our priorities to maintaining energy security with our commitments to delivering net zero by 2050?

The only approach that can and will lead to long-term energy security is a massive scaling of low- and zero-carbon technologies – including new, breakthrough technologies – and infrastructure. Choices made by policymakers now must not delay the longer-term adjustments that are needed for energy markets and infrastructure to reach net-zero by 2050. Further government action to drive and incentivise both supply and demand of renewable energy in the UK in needed to strengthen the UK's Energy Security Strategy. See the recent Net Zero Asset Owner Alliance statement for more information on our global position.

10. Is there a policy idea that will help us reach net zero you think we should consider as part of the review?

The financial sector can help accelerate the UK's net zero transition, but policy and regulatory action continue to provide the key drivers for the economy as a whole. That's why in recent publications with WWF we call for:

A Net Zero Investment Plan[17]

- A Net Zero Investment Plan is needed to catalyse private finance to deliver green growth. It would set out how government will align policy, regulation, and strategic public spending to signal a clear pathway to a net zero, nature positive economy.
- A Net Zero Investment Plan would constitute these key components:
    - Assessment of total investment needed across sectors of the UK economy to deliver on the 6th Carbon Budget, building on the CCC's existing assessment in 202017. This should include an assessment of what investment in natural capital and nature-based solutions will be needed to deliver net zero commitments, and build the resilience of the UK economy - for example to climate and supply chain shocks.
    - Tracking of financial flows across the economy (public and private), to identify where investment is falling short of the assessed need. This function should be carried out regularly by an independent body (such as the OBR). While we already

[17] Aviva and WWF, A Net Zero Investment Plan for Green Growth, 2022

have investment pathways from the CCC, and we have committed to a net zero financial centre, we currently have no cross-sector assessment to understand whether this is being met and whether capital flows are flowing to the most beneficial areas of the economy. Introducing a Net Zero Delivery Tracker for fiscal events, which would enable HMT to assess if public investment is getting the UK on track to achieve our net zero and nature goals, would support the Government in this regard.

  - A comprehensive, strategic financing plan to close the gaps between required and actual financial flows. This plan would consider how to catalyse the full breadth of financing available across the economy, including primary investment (e.g. to retrofit a building), secondary markets (e.g. investment and lending portfolios), and utilise existing public financing mechanisms, notably the British Business Bank and the UK Infrastructure Bank. It would clearly set out how strategic public finance, regulation and policy will be used to leverage in private finance to close these gaps, including developing innovative financing strategies that would focus on the specific challenges across the net zero and nature-positive landscape (e.g. buildings, high-carbon industries, and nature-based adaptation).
  - Align government governance structures with this whole of economy approach, requiring each department to understand how deliver the Net Zero Investment Plan, based on the sectoral pathways they are responsible for and making commensurate adjustments to policy and practice. Some plans already exist in this space, but have been developed in an ad hoc manner; therefore, the aim would be to make these plans consistent and coherent. They must cover operational emissions associated with the department as well as information on the way in which the policies that they are responsible for are driving the net zero transition and green growth.

UK economy-wide net zero transition plan[18]

- The Government should produce a plan to deliver the emissions reductions necessary to align with the Climate Change Committee's (CCC) carbon budget for the following five-year period. This plan should contain firm sectoral emissions pathways, and outline which departments are expected to deliver them via departmental net zero transition plans. The plan should also include content outside of the CCC's remit, for example overseas investment.
- Ambition should be ratchetted up over time in line with the science, with a clear commitment to update and revisit the plan biannually. The plan should include sections on key real economy policy areas and financial sector.
- This would send a powerful and clear signal to the market, helping to support investment in UK businesses aligning their strategy to the net zero transition and those businesses providing the solutions that the transition will require – in turn helping the UK to secure the economic benefits that the net zero transition will offer.

Introduce departmental net zero transition plans

- Flowing from the Government's overall net zero plan, each department should look to introduce their own Transition Plan, based on the sectoral pathways they are responsible for, which aligns with and feeds into the overall Government approach. Again, some plans already exist in this space, but have been developed in an ad hoc manner. Therefore the aim would be to make these consistent and coherent. Importantly, these must cover not

[18] Aviva and WWF, Aligning the UK Financial System to Net Zero, 2022

only operational emissions associated with the department but information covering the way in which the policies for which they are responsible are contributing to the net zero transition.

- As with the whole of economy UK Transition Plan, these should be fully revisited and reported against biannually, with new policies and key delivery risks flagged on an annual basis.

Establish a central unit to inform, coordinate and push net zero delivery across government

- Establishing a central unit would clarify and align various existing ad hoc processes in government in delivering net zero, for example Cabinet Committees and other cross-Governmental meetings. The core functions of the central unit would be to:
    - Develop, update and report against the whole of economy net zero transition plan.
    - Act as an internal centre of excellence to help departments prepare and deliver individual departmental transition plans.
    - Aggregate departmental transition plans together and ensure that they add up to delivering the whole of economy UK Transition Plan. This analysis should be published to enable external scrutiny by the OBR, guided by the CCC, and reporting to Parliament. • Act as a conduit between Government and the private sector on net zero transition planning to assist in alignment between the two, and ensure clarity of signals to the market on net zero policy.
    - Coordinate delivery of and reporting against departmental transition plans. A central unit would need to be given the resources and backing from the top of Government to achieve their objectives. For example, reporting directly to the Chancellor, Prime Minister and BEIS Secretary of State and be headed by a Permanent Secretary, to give parity with key departments.

Embed net zero into core economic and financial decision-making processes

- In order to deliver and embed the concept of Transition Planning within Government, we suggest the following enhancements to existing processes:
    - Give all Treasury spending and tax teams and the central Treasury coordinating teams a formal remit to consider net zero implications in tax and spending decisions - notably at key fiscal events (Budgets, Statements and Spending Reviews).
    - Introduce a requirement on Treasury to assess the aggregate climate change impact of the spending and taxation package set out in each fiscal event and to compare it to the intended net zero pathway contained in the whole of economy UK transition plan
    - Publish this assessment at each fiscal event, demonstrating how the UK's commitment to net zero is being delivered4 •
    - Introduce a net zero assessment into policy and project impact assessments
    - Revise the Government's economic assessment criteria (the Green Book) to better reflect the net zero commitment.

Ensure key transparency and accountability mechanisms reflect the above

- It is important that the Government is supported and held to account for the delivery of its net zero commitments. The process described in points 1-4 above should assist in this. In addition, we suggest the following key institutions will also have an enhanced role to play:
    - Give the Office for Budget Responsibility (OBR) a clear net zero remit. In line with the tweaks to Treasury roles set out in point 4 above, the OBR should build on its existing ad hoc work on net zero to report on the net zero implications of fiscal

    - events as a matter of course. Government should then update the OBR's Charter to reflect this additional role. The CCC should be given a role in providing expert guidance to the OBR.
    - The Public Accounts Committee should build on existing work in this space and task the National Audit Office with regularly tracking and reporting progress.
    - As departmental transition plans come onstream, each departmental select committee should hold its department to account for delivery, with the Environmental Audit Committee looking across the piece.
    - The OBR, CCC and Select Committees should all draw on the expertise and feedback for policy recommendations and assumptions embedded into private sector transition plans in providing this scrutiny.

New role for regulators

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    - Better enable accompanying sanctions for non-compliance, given the rising prevalence of greenwashing.