HM Treasury

Europe 2020:
National Reform Programme 2020

April 2020

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Foreword

On 31 January 2020, the United Kingdom withdrew from the European Union. As set out in the Withdrawal Agreement, the United Kingdom's legal obligations will continue in relation to the European Semester and the Stability and Growth Pact, for the duration of the transition period.

This National Reform Programme (NRP) forms part of that European Semester process. The annual European Semester process coordinates individual countries' structural reform programmes with the intention of stimulating economic growth.

The NRP is being presented to the European Commission in parallel with the UK's 2019-20 Convergence Programme, which sets out the UK Government's medium-term fiscal policies as required under the Stability and Growth Pact.

This National Reform Programme focussed on the actions that the government has been taking to address the Country Specific Recommendations addressed to the UK by the Council of the European Union at the end of the previous Semester cycle in July 2019:

> Recommendation 1: Ensure that the nominal growth rate of net primary government expenditure does not exceed 1.9% in 2020-2021, corresponding to an annual structural adjustment of 0.6% of GDP.
>
> Recommendation 2: Focus investment-related economic policy on research and innovation, housing, training and improving skills, sustainable transport and low carbon and energy transition, taking into account regional diversity.

The NRP also reports against policies to support the Europe 2020 strategy priorities of employment, research and development, education, poverty and social exclusion and climate change and energy sustainability.

The publication of the Annual Sustainable Growth Survey (ASGS) in the autumn kicks off the European Semester cycle. The 2020 ASGS has a focus on the use of targeted investment and implementation of structural reforms to stimulate productivity growth and environmental sustainability.

The 2020 Country Reports were published by the Commission on 26 February 2020. The UK was found to have made progress in meeting investment-related policy needs, including on supporting research and innovation, boosting housing supply, facilitating the low carbon and energy transition, and sustainable transport. The Report found that challenges remain on training and skills. The UK was found to be performing well on reducing greenhouse gas emissions in line with the national targets set in the Europe 2020 strategy, while it had also made particular progress against achieving its environment-related Sustainable Development Goals.

Under devolution settlements, policies can differ across England, Northern Ireland, Scotland and Wales. The Scottish Government, the Welsh Government and the Northern Ireland Executive have provided all the information contained in this report relating to their respective devolved policy areas.

1 Introduction

Context

1.1 The work of the last ten years in bringing borrowing and debt back under control has ensured the public finances are well placed to deal with the challenges posed by Covid-19.

1.2 The government has announced unprecedented support for business and workers to protect them against the current economic emergency. This includes:

- an initial £330 billion of loans and guarantees for businesses, equivalent to 15% of UK GDP
- the Coronavirus Job Retention Scheme, to help firms continue to keep people in employment. All UK employers can apply for a grant, which will help them to continue paying part of their employees' wages if they would otherwise have been laid off during this crisis
- significant changes to the operation of statutory sick pay universal credit, and employment and support allowance to ensure that people have quicker and more generous access to a support system, along with the Self-Employment Income Support Scheme

1.3 The global economy has been hit hard by the spread of Covid-19, as well as the accompanying containment measures. Early data releases suggest the short-term impact of Covid-19 on the global economy may be significantly larger than that of the global financial crisis. This has compounded existing weaknesses in both business and consumer confidence, which contributed to the slowest rate of global GDP growth since the financial crisis in 2019 (2.9%). The spread of the virus means that growth in 2020 is likely to be significantly below that of last year.

Productivity and Investment

1.4 Increasing productivity is the only sustainable way to drive economic growth and improve living standards. Since 2010, the government has put in place significant investment and reform programmes, all contributing towards building a modern and dynamic economy, including reducing taxes to support business investment and improving skills through investment in apprenticeships.

1.5 Over the next five years, the government plans to invest over £600 billion in the UK's future prosperity, and by the end of the Parliament net investment, including in infrastructure, will be triple the average over the last forty years in real terms. The government recently set out plans at the Budget which include investing £5bn to support the delivery of gigabit-capable broadband to the hardest to reach areas, record investment in strategic roads in England and an additional £510 million to improve mobile coverage in rural areas. Further detail will be set out in the National Infrastructure Strategy and at the Comprehensive Spending Review.

1.6 The government is committed to ensuring the UK has a modern and efficient network of infrastructure. The National Infrastructure Commission was established to provide impartial, expert advice, and in July 2018 made recommendations to the government on the UK's infrastructure needs over the next 30 years in the first-ever National Infrastructure

Assessment (NIA). The government is already taking long-term decisions to make sure there is the infrastructure capacity to meet the needs of the future economy, and will respond fully to the recommendations in the NIA in a National Infrastructure Strategy in the coming months. The Government has approved the construction of Hinkley Point C, the first new nuclear power station in the UK for a generation, and preparatory work is underway on HS2, the new backbone of the UK rail network.

1.7 The government remains committed to a system of strong, independent economic regulation of the privatised utilities, which facilitates investment in key infrastructure projects, while simultaneously ensuring that customer bills are affordable. Through the Infrastructure Finance Review, the government consulted on how best to support private investment in infrastructure, so that good infrastructure projects continue to be able to access the finance they need. The review will conclude alongside the National Infrastructure Strategy.

1.8 The government is committed to levelling up every part of the UK and devolving power to people and places. Now that the UK has left the European Union, we will create the UK Shared Prosperity Fund (UKSPF), the domestic successor to EU structural funds. The UKSPF will be targeted to the UK's specific needs, and at a minimum match the size of European structural funds in each nation. This builds upon previous commitments to create a fund which tackles inequalities between communities by raising productivity, especially in those parts of the UK whose economies are furthest behind. Through the UK Shared Prosperity Fund, the UK Government can cut out bureaucracy and create a fund which invests in UK priorities and is easier for local areas to access.

1.9 The devolved administrations are also taking action to tackle structural reform challenges in areas of devolved competence:

- In **Northern Ireland**, an outcomes-based approach is being taken to the work of government. The production of an evidence-based, generational Programme for government is a priority for the newly formed Executive. At its centre will be a framework of outcomes designed to target those things that will make real improvement to people's lives. As reflected in the *New Decade, New Approach* document the immediate priorities of the new Executive are in relation to transformation of public services delivering health and social care, education and justice; investing for the future and delivering a fair and compassionate society.

- The priority of the **Scottish Government** is to support Scotland's economic resilience and to protect jobs, investment, and long-term prosperity and growth prospects across Scotland. Scotland's Economic Strategy sets out a vision to create a more cohesive and resilient economy that improves the opportunities, life chances and wellbeing of every citizen in Scotland. At the core of the Strategy is the Government's Purpose, which is underpinned by two key pillars – increasing competitiveness and tackling inequality. Within Scotland's Economic Strategy there are four priority areas which the Scottish Government continues to take action across to grow Scotland's economy, and ensure it remains resilient. The four priority areas are:
    - investing in its people, infrastructure and assets in a sustainable way
    - fostering a culture of innovation and research and development
    - promoting inclusive growth and creating opportunity through a fair and inclusive jobs market and regional cohesion

  - promoting Scotland on the international stage to boost trade and investment, influence and networks

- The Economic Action Plan, which fully incorporates the Rural Economy Action Plan, was relaunched in January 2020 to reinforce the work this Government is taking to deliver sustainable and inclusive economic growth. It reflects progress in implementing the range of existing measures being taken to grow the Scottish economy as well as highlight new commitments from last year's Programme for Government that will help to build a strong, vibrant and diverse economy that promotes wellbeing and attracts investment.

- It reflects key investment in a highly skilled workforce and nurturing the economy of the future. The actions in this plan will also put Scotland at the forefront in transitioning to a carbon neutral, circular economy. This will enable us to reach our net zero targets by 2045. The focus on the refreshed plan is to look to the future and how we will work to grow the economy following Brexit.

- Some of the key highlights of the plan include:

  - simplifying the business support environment through a dedicated website that provides access to products, services and events on offer from our enterprise and skills agencies and Business Gateway
  - the Scottish National Investment Bank to be operational in 2020, supported by the £15 million Building Scotland Fund and a further £340 million in investment to 2021
  - dedicated place-based approach to inclusive growth through a commitment to regenerate the Clyde, with job creation, infrastructure investment, recognising the climate change opportunity and utilising the river
  - key focus on collective wellbeing economy to ensure that Scotland is committed to Fair Work, ensuring a just transition to a Carbon Neutral Economy
  - investing an additional £10 million in Scotland's workforce of to make the skills sector more responsive to the needs of the economy, and to help people into the labour market
  - driving growth in the rural economy through targeted support for small and micro businesses
  - a focus on growing exports and international investment and attracting global talent

- The Welsh Government's cross-cutting national strategy, 'Prosperity for All', sets out the priorities for this government's term, and lays the foundations for further action over the longer term. The strategy sets out the Welsh Government's objectives under four themes: prosperous and secure, healthy and active, ambitious and learning, and united and connected. The strategy also sets out five priority areas: early years, housing, mental health, skills and social care, where a whole government approach could deliver the greatest contribution to people's long-term prosperity and well-being.

UK 2020 National Reform Programme

1.10 NRPs are submitted by Member States to the Commission to outline their structural reform plans to promote growth and employment. This is part of the Europe 2020 strategy for smart, sustainable and inclusive growth. In parallel, under the Stability and Growth Pact, Member States submit Stability Programmes (euro area Member States) or Convergence Programmes (non-euro area Member States) reporting on budgetary and fiscal policies. In this way, the European Semester aligns reporting cycles for Europe 2020 and the Stability and Growth Pact.

1.11 On 31 January 2020, the United Kingdom withdrew from the European Union. As set out in the Withdrawal Agreement, the United Kingdom will continue to apply the EU acquis, including in matters relating to the European Semester and the Stability and Growth Pact, for the duration of the transition. Therefore, during this period the Government will continue to participate in the Europe 2020:National Reform Programme, and report on its achievements.

1.12 The NRP is presented in accordance with Council recommendation 2010/410 on broad guidelines for economic policy. The parts of the NRP relating to country-specific recommendations (CSRs) on skills deliver the UK's report to the Council and Commission on employment policy measures, and complete multilateral surveillance in the EU Employment Committee (EMCO), the Council's examination of Member States' employment and labour market policies, in the light of the Employment Guidelines in the procedure specified in Article 148 TFEU.

1.13 This NRP sets out the UK's economic prospects and plans, including:

- the macroeconomic context in the UK, consistent with the UK's 2019-20 Convergence Programme
- actions taken to address the two CSRs addressed to the UK by the European Council in July 2019
- the UK's approach to national monitoring and actions taken in support of the five headline Europe 2020 targets agreed by the European Council in June 2010

1.14 The 2019 NRP draws on publicly available information, including the Spring Budget 2020 and other relevant documents and announcements. Further details are available in the original documents.

1.15 The 2020 NRP reports on the implementation of existing structural reform commitments. As such, it sets out recent actions taken by the UK as a whole, including those by the UK Government and, where policies are devolved, by the devolved administrations of Scotland, Wales and Northern Ireland. This distinction is made clear throughout the document. These actions are consistent with the Europe 2020 Integrated Guidelines (made up of the Broad Economic Policy Guidelines and the Employment Guidelines) presented under Articles 121 and 148 of the Treaty on the Functioning of 8 the European Union (TFEU). They also follow the broad orientations for structural reforms provided by the European Commission's 2019 Annual Growth Survey (AGS).

1.16 The devolved administrations have contributed fully to the development of the 2020 UK NRP. This is in line with the devolved administrations' commitment to engage positively with the EU Institutions and represent regional interests.

Stakeholder engagement

1.17 The government consults widely on policy development as a matter of course. The governing principle is proportionality of the type and scale of consultation to the potential impacts of the proposal or decision being taken, and thought is given to achieving real engagement rather than merely following bureaucratic process. Consultation forms part of wider engagement, and decisions on whether and how to consult should in part depend on the wider scheme of engagement. Since the NRP does not contain any new policy announcements, it is not subject to formal consultation.

1.18 The focus of the 2020 NRP is on implementation and delivery of existing reform commitments. Given the key role that non-governmental organisations play in delivering structural reforms, this document is illustrated with examples of how stakeholders are involved in translating policies into concrete outcomes.

2 Macroeconomic context

2.1 This section sets out the independent Office for Budget Responsibility's (OBR) Spring Budget 2020 economic forecasts for 2019 to 2024. This includes forecasts for aggregate gross domestic product (GDP) growth, the components of GDP, inflation and the labour market. Both the OBR's forecast and the latest data on the economic indicators below cover the time period before the outbreak of Covid-19 in the UK. These therefore do not reflect the effects of the outbreak on the economy.

Table 2.A: Summary of the OBR's central economic forecast[1] (Percentage change on a year earlier, unless otherwise stated)

	Percentage change on a year earlier, unless otherwise stated						
		Forecast					
	2018	2019	2020	2021	2022	2023	2024
GDP growth	**1.3**	**1.4**	**1.1**	**1.8**	**1.5**	**1.3**	**1.4**
GDP growth per capita	**0.7**	**0.8**	**0.5**	**1.3**	**1.1**	**0.9**	**1.1**
Main components of GDP							
Household consumption[2]	1.6	1.3	1.1	1.2	1.2	1.4	1.4
General government consumption	0.4	3.6	3.7	2.8	2.1	1.9	2.2
Fixed investment	-0.2	0.4	-0.8	3.4	2.9	2.0	1.8
Business investment	-1.5	0.3	0.0	1.8	3.0	2.4	2.3
General government	1.3	2.1	1.9	10.9	4.6	1.8	1.2
Private dwellings[3]	6.5	-0.3	-4.2	1.5	1.6	1.3	1.2
Change in inventories[4]	0.2	0.1	-0.1	0.1	0.0	0.0	0.0
Net trade[4]	-0.2	0.0	-0.1	-0.3	-0.2	-0.4	-0.3
CPI inflation	**2.5**	**1.8**	**1.4**	**1.8**	**2.1**	**2.1**	**2.0**
Employment (millions)	**32.4**	**32.8**	**33.0**	**33.1**	**33.2**	**33.3**	**33.4**
Unemployment (% rate)	**4.1**	**3.8**	**3.8**	**3.8**	**3.9**	**4.0**	**4.1**
Productivity per hour	**0.5**	**0.0**	**0.9**	**1.2**	**1.2**	**1.1**	**1.2**

[1] All figures in this table are rounded to the nearest decimal place. This is not intended to convey a degree of unwarranted accuracy. Components may not sum to total due to rounding and the statistical discrepancy.

[2] Includes households and non-profit institutions serving households.

[3] Includes transfer costs of non-produced assets.

[4] Contribution to GDP growth, percentage points

Source: Office for National Statistics and Office for Budget Responsibility.

Growth forecast

2.2 The Office for National Statistics (ONS) estimates that the UK economy grew by 1.4% in real terms in 2019, 0.2 percentage points higher than the OBR expected in its Spring Statement 2019 forecast. In March 2020, the OBR forecasted that GDP would grow by 0.2% in Q1 2020 and 0.4% in Q2 2020, and expected annual GDP growth of 1.1% in 2020 and 1.8% in 2021.

[1] All figures in this table are rounded to the nearest decimal place. Components may not sum to total due to rounding and the statistical discrepancy.

Employment and wages forecast

2.3 Employment increased throughout 2019, breaking records multiple times. This strength continued into 2020, where employment increased to a new record high of 33.0 million in the three months to January 2020. The unemployment rate, at 3.9% in the three months January 2020 was close to the lowest rate since 1975.

2.4 Both total nominal wage growth (including bonuses) and regular nominal wage growth (excluding bonuses) were 3.1% in the three months to January 2020. Over the same period, real total pay growth increased to 1.6%; the 19th consecutive month of real wage growth. Real regular pay growth increased on the year to 1.5%; the 24th consecutive month in which it was positive. The OBR forecasted productivity growth of 0.9% 2020. Over the medium term, productivity growth was expected to increase to around 1.2% over the remainder of the forecast, up to 2024.

Inflation and average earnings forecast

2.5 Consumer Prices Index (CPI) inflation stood at 1.7% in February, a decrease from January's figure of 1.8% and close to 2019's average rate of 1.8%. CPI inflation has been relatively subdued throughout 2019, mainly due to: developments in the household energy sector that stem from the implementation of Ofgem's energy price cap in January 2019; weak contributions from fuel prices; and the diminishing impact of the 2016 depreciation. The ONS's headline measure of inflation, the Consumer Prices Index including owner occupiers' housing costs (CPIH) inflation, was 1.8% in January, an increase from 1.4% in December.[2] The OBR forecasted CPI inflation to be 1.4% in 2020, rising to 1.8% in 2021 and then staying around 2.0% for the rest of the forecast period.

Table 2.B: Detailed summary of forecast

	Percentage change on a year earlier, unless otherwise stated						
		Forecast					
	2018	2019	2020	2021	2022	2023	2024
UK economy							
Gross domestic product (GDP)	1.3	1.4	1.1	1.8	1.5	1.3	1.4
GDP per capita	0.7	0.8	0.5	1.3	1.1	0.9	1.1
GDP level (2018=100)	100.0	101.4	102.5	104.3	105.8	107.1	108.6
Nominal GDP	3.5	3.3	3.1	3.8	3.7	3.4	3.5
Output gap (per cent of potential output)	0.2	0.1	-0.1	0.4	0.4	0.2	0.0
Expenditure components of GDP							
Domestic demand	1.3	1.6	1.1	2.0	1.7	1.6	1.7
Household consumption[1]	1.6	1.3	1.1	1.2	1.2	1.4	1.4
General government consumption	0.4	3.6	3.7	2.8	2.1	1.9	2.2
Fixed investment	-0.2	0.4	-0.8	3.4	2.9	2.0	1.8
Business	-1.5	0.3	0.0	1.8	3.0	2.4	2.3
General government[2]	1.3	2.1	1.9	10.9	4.6	1.8	1.2
Private dwellings[2]	6.5	-0.3	-4.2	1.5	1.6	1.3	1.2
Change in inventories[3]	0.2	0.1	-0.1	0.1	0.0	0.0	0.0
Exports of goods and services	1.2	3.7	-0.6	-0.5	-0.6	-1.1	-1.0
Imports of goods and services	2.0	3.6	-0.2	0.4	0.2	0.2	0.2
Balance of payments current account							
Per cent of GDP	-3.9	-3.9	-3.8	-3.9	-4.0	-4.0	-4.1
Inflation							

[2] CPIH extends CPI to include costs associated with owning, maintaining and living in one's own home as well as council tax.

CPI	2.5	1.8	1.4	1.8	2.1	2.1	2.0
RPI	3.3	2.6	2.2	2.7	3.1	3.0	2.9
GDP deflator at market prices	2.2	1.8	2.0	2.0	2.2	2.1	2.1
Labour market							
Employment (million)	32.4	32.8	33.0	33.1	33.2	33.3	33.4
Productivity per hour	0.5	0.0	0.9	1.2	1.2	1.1	1.2
Wages and salaries	4.8	3.5	3.6	3.8	3.6	3.3	3.2
Average earnings[4]	3.3	2.8	3.3	3.6	3.4	3.1	3.1
LFS unemployment (% rate)	4.1	3.8	3.8	3.8	3.9	4.0	4.1
Household sector							
Real household disposable income	2.4	0.8	1.1	1.6	1.3	1.4	1.4
Saving ratio (level, per cent)	5.8	5.7	6.6	7.0	7.2	7.2	7.2
House prices	3.2	1.5	3.3	7.0	5.8	4.6	3.8
World economy							
World GDP at purchasing power parity	3.6	2.9	3.0	3.6	3.5	3.6	3.6
Euro area GDP	1.9	1.2	1.1	1.4	1.4	1.3	1.3
World trade in goods and services	3.7	1.1	1.9	3.9	3.6	3.7	3.8
UK export markets[5]	3.0	1.5	1.6	3.4	3.3	3.4	3.5

[1] Includes households and non-profit institutions serving households.

[2] Includes transfer costs of non-produced assets.

[3] Contribution to GDP growth, percentage points.

[4] Wages and salaries divided by employees.

[5] Other countries' imports of goods and services weighted according to the importance of those countries in the UK's total exports.

Source: Office for National Statistics and Office for Budget Responsibility.

Outlook for the public finances

2.6 The government has made significant progress since 2010 in restoring the public finances to health; by 2018-19 the deficit had been reduced by four-fifths - from 10.2% of GDP to 1.8% - and debt brought back under control. The work of the last ten years in bringing borrowing and debt back under control has ensured the public finances are well placed to deal with the challenges posed by COVID-19.

2.7 The OBR's Budget 2020 forecast confirmed that the Chancellor delivered the Budget within the Government's fiscal rules. The current budget is in surplus of 0.5% of GDP in 2022-23; public sector net investment averages 2.9% of GDP over the OBR's five-year forecast period; and the debt interest to revenue ratio remains below 6%, peaking at 3.5% in 2021-22.

However, it is clear that the impact on the economy as a result of Covid-19, and the government's necessary response to it will lead to a significant increase in borrowing this year compared to the OBR's forecast. We expect this increase in borrowing to be temporary. Under the OBR's COVID-19 reference scenario[3] borrowing is expected to rise sharply this year, but fall back quickly in 2021-22 as temporary policy costs end and the economy recovers. The OBR note that the government's policy response will have substantial direct fiscal costs, but that the measures taken should help limit the long-term damage to the economy and public finances – and the costs of inaction would have been higher.

[3] Coronavirus reference scenario, OBR, April 2020

3 UK Country-specific Recommendations

3.1 The Country-specific Recommendations (CSRs), addressed to the UK by the Council of the European Union in July 2019, are to:

1. Ensure that the nominal growth rate of net primary government expenditure does not exceed 1.9% in 2020-2021, corresponding to an annual structural adjustment of 0.6% of GDP.
2. Focus investment-related economic policy on research and innovation, housing, training and improving skills, sustainable transport and low carbon and energy transition, taking into account regional diversity.

Fiscal policy

Recommendation 1

Ensure that the nominal growth rate of net primary government expenditure does not exceed 1.9% in 2020-2021, corresponding to an annual structural adjustment of 0.6% of GDP.

Fiscal responsibility

3.2 The government has made significant progress in restoring the public finances to health over the last decade. By 2018-19 the deficit had been reduced by four-fifths from -10.2% of GDP to 1.8% - and debt brought back under control.

3.3 Spring Budget 2020 was delivered within the government's fiscal rules. These rules are: to have the current budget at least in balance by the third year of the rolling, five-year forecast period; to ensure that public sector net investment (PSNI) does not exceed 3% of GDP on average over the rolling five-year forecast period; if the debt interest to revenue ratio is forecast to remain over 6% for a sustained period, the government will take action to ensure the debt-to-GDP ratio is falling.

3.4 In their Spring Budget 2020 forecast, the OBR confirmed the government met these fiscal rules. The current budget is in surplus of 0.5% of GDP in 2022-23; public sector net investment averages 2.9% of GDP over the OBR's five-year forecast period; and the debt interest to revenue ratio remains below 6%.

3.5 However, it is clear that the impact on the economy as a result of COVID-19, and the government's necessary response to it will lead to a significant increase in borrowing this year compared to the OBR's forecast. We expect this increase in borrowing to be temporary. Under the OBR's COVID-19 reference scenario borrowing is expected to rise sharply this year, but fall back quickly in 2021-22 as temporary policy costs end and the economy recovers. The OBR note that the government's policy response will have substantial direct fiscal costs, but that the measures taken should help limit the long-term damage to the economy and public finances – and the costs of inaction would have been higher.

3.6 Building on Spending Round 2019, the government used Spring Budget 2020 to invest in better public services and to mark the start of a decade of investment in communities across the country. The OBR's forecast for Spring Budget 2020 (which did not take into account the economic impact from Covid-19 or subsequent policy response) has that Total Managed Expenditure (TME) will have a nominal growth rate of 4.6% in 2020-21 but which will increase TME's proportion of GDP by 0.5% from 39.8% to 40.3%. This is within the fiscal rules set out by government.

Investment-related economic policy

Recommendation 2

Focus investment-related economic policy on research and innovation, housing, training and improving skills, sustainable transport and low carbon and energy transition, taking into account regional diversity.

Research and innovation

3.7 The government has made a commitment to reaching 2.4% of GDP investment in research and development by 2027, and 3% in the longer term, to ensure that the UK remains at the forefront of new products and new markets. Recent policy developments are set out below.

3.8 UK Research and Innovation (UKRI), established in April 2018, brings together the seven Research Councils, Innovate UK, and Research England, to invest in and facilitate research and innovation activities across the UK. UKRI was responsible for spending around £7.5 billion in 2019/20.

3.9 The Industrial Strategy Challenge Fund (ISCF) brings together leading research and business to develop the technologies and industries of the future. So far £2.6 billion has been allocated to ISCF challenges over three waves of investment.

3.10 The UK is investing heavily to maintain a strong research base capable of pioneering new innovations that can attract investment and allow the UK to become world-leading in the key industries of the future.

3.11 The UK's tax credits scheme supports more companies to invest in R&D. Under the scheme, £4.3bn has been claimed for 2017-18, supporting private expenditure of £31.3 billion on R&D. In Budget 2020, the government raised the Research and Development Expenditure Credit rate
(RDEC) to 13% and announced consultation on whether expenditure on data and cloud computing should qualify for the R&D tax credits.

3.12 Further detail on the UK's approach to investment-related R&D policy is set out in chapter 4.

Housing

3.13 Over 241,000 new homes were delivered in 2018/19. This represents the highest level of new homes delivered across England in the last 30 years and brings the total number of additional homes delivered since 2010 to 1.5 million - clear progress towards our ambition to deliver 300,000 homes a year on average in England by the mid-2020s.

3.14 To deliver on the government's ambition and make the housing market work better, we are implementing the broad range of initiatives set out in the February 2017 Housing White

Paper, and further significant reforms. Taken together, this includes more than £44 billion of financial support to 2022/23 and streamlined planning rules.

3.15 A key priority is delivering more affordable homes, including for social rent. To this end, the government has made £9.1 billion available through the Affordable Homes Programme to March 2022 for housing associations and local authorities to deliver up to 250,000 new affordable homes of a wide range of tenures, including social rent. In September 2018, the government announced an additional £2 billion of long-term funding certainty for housing associations from 2022. This ten-year funding commitment marks the first time any government has invested such long-term funding in new homes through housing associations.

3.16 The government has committed over £29 billion Help to Buy Equity Loan funding from April 2013 to March 2023 to support up to 470,000 households into home ownership. It is estimated that 37% of all homes sold using the Help to Buy scheme between 2015 and 2017 would not have otherwise been built, equating to 14.5% of all new build homes constructed over that period.

3.17 To further support the delivery of new homes, the government launched the Home Building Fund in October 2016 with an initial allocation of £3 billion but received an additional £1.5 billion in Budget 2017 because of the strong response from the SME sector to this intervention. We have committed 60% of the overall £2.5 billion Short Term Fund, which funds short-term development loans (of which 93% of contracted transactions are with SMEs borrowers). We have committed 70% of the Long Term Fund, which funds long term infrastructure and should unlock c.128,000 homes.

3.18 To provide the infrastructure to unlock new homes, Government has continued to make progress delivering the Housing Infrastructure Fund (HIF). At Autumn Budget 2018, an additional £500m was announced for the fund, taking it to £5.5 billion in total. In the last year, 110 Marginal Viability Funding projects worth £759 million to unlock up to 120,000 homes were announced as approved following funding clarification on 10 July 2019. So far, we have also announced 25 successful Forward Funding projects, totalling almost £2.6 billion that will unlock up to 180,000 homes across the country.

Training and improving skills

Apprenticeships

3.19 We introduced the apprenticeship levy in 2017 to encourage sustained employer investment in high quality apprenticeships, and in the 2019-20 financial year over £2.5 billion per year is available for investment in apprenticeships in England. That's double what was spent in 2010 in cash terms. The apprenticeship levy is an important part of the changes to raise apprenticeship quality, creating long-term, sustainable investment in training. Only around 2% of employers pay the levy, but income from the levy is also used to fund training for existing apprenticeship learners and new apprenticeships in employers that do not pay the levy.

3.20 The Government is committed to supporting smaller employers, and has awarded funding totalling more than £500 million to hundreds of providers across the country to deliver apprenticeship training for non-levy payers between January 2018 and April 2019.

3.21 Our offer supports employers of all sizes to try to improve training and skills throughout the workforce. From January 2020 small and medium-sized employers who do not pay the apprenticeship levy have access to the same digital platform as larger companies. This gives small to medium-sized businesses a greater choice of quality training providers, and facilitates closer working between smaller employers and training providers, giving employers access to the skills they need.

3.22 In April 2019 we increased the amount of levy that employers can transfer from 10% to 25%; and reduced the co-investment in apprenticeships made by most employers from 10% to 5% of training costs for new starts. These policy changes were designed to further support the take-up of apprenticeships by smaller employers

3.23 In April 2019 a further £3.5 million was announced for the Institute for Apprenticeships to introduce new standards and updating existing ones so that more courses can be offered – meaning more choice for those considering their training options.

3.24 Over 500 standards are already approved, in all sectors of the economy - with more on the way. There were 248,100 starts on apprenticeship standards reported in the 2018/19 academic year; an increase of 51.5% on the 163,700 reported for the previous year (2017/18). This represents 63.1% of all starts reported in the 2018/19 academic year – much higher than the 43.6% starts on standards reported for 2017/18.

3.25 Apprenticeship standards are being taken up in increasing numbers and with enthusiasm by employers across a wide range of sectors. Employers, providers, and apprentices say that the standards are creating a step change in the quality of apprenticeships across the country. However, the apprenticeships programme is complex, and it will take time for all the reforms to fully bed in. For example, we do not expect all apprentices to be on the higher-quality standards until around 2025.

The National Retraining Scheme and National Skills Fund

3.26 The National Retraining Scheme will help prepare adults for future changes to the economy, including those brought about by automation, and help them retrain into better jobs.

3.27 We are initially investing £100 million to develop the scheme, which will give adults whose jobs are at risk of changing the support and tools they need to retrain and move into a better job. This funding has allowed us to start delivering the first part of the service, whilst developing and evaluating as we build-up the scheme.

3.28 The scheme is led and overseen by the National Retraining Partnership – a strategic partnership the Confederation of British Industry (CBI), the Trades Union Congress (TUC) and the Government. This is an innovative way of working, ensuring the collective voices of businesses and workers are heard.

3.29 The National Retraining Scheme is being rolled out with a test and learn approach ensuring that every part of the service works for the people who need it. A series of products are being developed and tested in parallel, before being released one by one, and eventually making up the full National Retraining Scheme service. This is a big and complex challenge, which is why we are starting small, learning as we go.

3.30 The scheme will focus on adults aged 24 and over, without a degree-level qualification and working below a certain wage threshold that we are testing to focus on those earning low to medium wages.

3.31 The first part of the scheme, Get Help to Retrain, is now available in 6 areas across the country and will be rolled out across the country in 2020. We are also progressing other aspects of the scheme, for example, exploring how technical training can be delivered through the scheme. We are also developing our online training offer, which aims to tackle the largest barrier adults face to learning by providing valuable training at a time and place that fits around their busy lives and responsibilities.

3.32 We are also providing an extra £3 billion, over the course of this Parliament, for a new National Skills Fund that will build on existing reforms to help people learn new skills and prepare for the economy of the future.

Adult Education Budget (AEB)

3.33 The AEB supports three statutory entitlements enabling eligible learners to access fully funded training:

- English and maths, up to and including level 2, for individuals aged 19 and over, who have not previously attained a GCSE grade A* - C or grade 4, or higher, and/or
- First full qualification at level 2 for individuals aged 19 to 23, and/or
- First full qualification at level 3 for individuals aged 19 to 23.

3.34 A fourth statutory entitlement to fully funded specified digital skills qualifications for adults, aged 19+, with no or low digital skills will come into effect from 1 August 2020.

3.35 The 2019/20 AEB has an allocation of £1.34 billion. About 50% of the AEB is devolved to 6 regions and the Mayor of London. These authorities are responsible for the provision of AEB-funded adult education for their residents, and allocation of the AEB to providers. The ESFA is responsible for the remaining AEB in non-devolved areas.

3.36 Further detail on the UK's approach to investment-related employment policy is set out in chapter 4.

Sustainable transport

Transport Decarbonisation Plan

3.37 Transport is now the largest contributor to UK domestic greenhouse gas (GHG) emissions. The UK Government is clear that transport must play its part in reaching our economy wide target of net zero greenhouse gas emissions by 2050 and we must step up the pace to deliver a zero-emission transport system.

3.38 To do so, on 15 October 2019 the government announced a bold, world-leading plan that, ahead of COP26, will demonstrate our commitment to a net zero transport sector.

3.39 The Transport Decarbonisation Plan, currently under development, will take for the first time a holistic and cross-modal approach to transport decarbonisation. It will not only think in terms of modes of transport, but also technology and places, considering where and how transport contributes to greenhouse gas emissions and how to reduce them across the UK.

3.40 The full plan will set out in detail what government, business and society will need to do to deliver the significant emissions reduction needed across all modes of transport and will be published in due course.

Road transport

3.41 We are investing nearly £1.5 billion between April 2015 and March 2021, with grants available for plug-in vehicles and schemes to support chargepoint infrastructure. On 4th February 2019 the Prime Minister announced that Government is consulting on bringing forward the end to the sale of new petrol and diesel cars and vans from 2040 to 2035, or earlier if a faster transition appears feasible, as well as including hybrids for the first time.

3.42 Nearly 230,000 ultra-low emission battery electric and plug-in hybrid cars are registered in the UK, up from just over 1,300 in 2010. The UK now has over 17,000 devices providing over

24,000 publicly available chargepoints. This includes over 2,400 rapid chargepoints, one of the largest networks in Europe.

3.43 Our grant schemes and the £400 million Charging Infrastructure Investment Fund will see thousands more electric vehicle charge-points installed across the UK. The first £70 million investment will create 3,000 new rapid chargepoints, more than doubling the number of rapid chargepoints across the UK by 2024.

3.44 Along with the private sector we will invest £1 billion in charging infrastructure, making sure that everyone is within 30 miles of a rapid electric vehicle charging station.

HGVs

3.45 Alongside the Transport Decarbonisation Plan, we are working with industry to develop a new cross-modal Future of UK Freight strategy to reflect freight's contribution to carbon emissions and its role in achieving wider economic goals.

3.46 The strategy will also address long-term challenges and opportunities for freight including workforce, skills, technology and consumer behaviours.

Rail

3.47 To date, we have delivered hundreds of miles of rail electrification. The Rail Industry Decarbonisation Taskforce has informed the government and rail industry's approach to decarbonisation over the last year. Network Rail is developing a Traction Decarbonisation Network Strategy which will examine which parts of the network are best suited to use of hydrogen trains, as well as battery and electrification. This will inform government decisions in 2020.

3.48 In February 2019 we invited MPs to work with local authorities and communities across England and Wales to propose how they could use our £500 million fund to reinstate axed local rail services.

Aviation

3.49 We firmly believe that aviation needs to play its part in reaching the UK's net zero target – which already includes domestic aviation emissions. We are carefully considering the September 2019 aviation advice of the Committee on Climate Change and we will publish our position on aviation and net zero for consultation in due course.

3.50 The government is committed to the International Civil Aviation Organisation's Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), which was agreed in 2016 and is the first worldwide scheme to address CO_2 emissions in any single sector. The UK is negotiating for ICAO to agree a long-term emissions reduction goal by its 41st Assembly in 2022.

3.51 We are investing £1.95 billion from 2013 to 2026 in aerospace R&D but also supporting the development of the infrastructure and systems needed to foster aviation innovation.

3.52 In August 2019 we announced £300 million of joint investment with industry, through the Future Flight Challenge. This will support the development of innovative aviation systems, the infrastructure and regulations needed to support them.

Maritime

3.53 The 2019 Clean Maritime Plan set out the UK's pathway to zero emissions shipping. It identifies ways to tackle air pollutants and greenhouse gas emissions while securing growth opportunities, placing the UK at the forefront of the global transition to clean shipping.

3.54 Implementation of the Clean Maritime Plan is underway. We have funded two competitions for early stage innovation projects in clean maritime. We will launch this year a consultation and a call for evidence on the role of economic instruments in supporting the transition to zero emission shipping.

Cycling, walking and public transport

3.55 The Statutory Cycling and Walking Investment Strategy aims to double cycling and increase walking by 2025. Around £2 billion is being invested in cycling and walking over this Spending Review period. A further £350 million will be invested over the next four years through the Cycle Infrastructure Fund with mandatory design standards for new routes.

3.56 Our range of transport and infrastructure funds, including the £1 billion Future High Streets Fund, the £2.45 billion Transforming Cities Fund and the £10 billion Single Housing Infrastructure Fund support local authorities in the delivery of the cycling and walking priorities set out in their local cycling and walking infrastructure plans. A further £350 million will be invested over the next four years through the Cycle Infrastructure Fund with mandatory design standards for new routes.

3.57 The Transforming Cities Fund will provide an opportunity for the industry to work with local authorities on tackling congestion and bringing communities together. To make bus journeys more sustainable we have also awarded £48m to local authorities and bus operators through our Ultra-Low Emission Bus Scheme. In September 2019 we announced a £220 million package to transform bus services and deliver a better deal for bus users. This includes creating Britain's first all-electric bus town. Furthermore, there are now over 3,000 electric taxis operating just in London – each supported with up-to £7,500 through our Plug in Taxi Grant.

3.58 On 11 February 2020 the Prime Minister announced a £5 billion package of new funding for buses, cycling and walking. Details of how this funding will be apportioned is expected to be announced at the Budget, together with details of how it will be profiled and allocated. This builds on around £2.4 billion of investment over the five years to 2020/21, already a doubling of spend per head over the previous five-year period.

Low carbon and energy transition

3.59 The Climate Change Act 2008 (CCA) established legally binding 'carbon budgets', which cap emissions over successive 5-year periods and must be set 12 years in advance, seeking to put the UK on a cost-effective pathway to reduce emissions by at least 80% from 1990 levels by 2050 and by at least 34% by 2020. In June 2019 the UK Government passed legislation to set a new net zero greenhouse gas emissions target for 2050.

3.60 In October 2017, the UK Government published its Clean Growth Strategy setting out ambitious policies and proposals, through to 2032, to reduce emissions across the economy and promote clean growth. Since the Clean Growth Strategy was published, the UK Government has continued to invest in low carbon innovation and energy transition, including through the Industrial Strategy Challenge Fund and the Contracts for Difference scheme.

3.61 **The Industrial Strategy Challenge Fund (ISCF)**: The ISCF (also covered in the 'research and innovation' section) provides the private and public sectors with targeted research and development (R&D) investment in the areas of the Grand Challenges, one of which is Clean Growth. This funding programme brings together the research base with highly innovative businesses to provide solutions to major industrial and societal challenges. Investing in strategic innovation challenges will create transformative opportunities for businesses and sectors across the UK. The ISCF is part of the £4.7 billion National Productivity Investment Fund (NPIF), which will grow by a further £2.3 billion of additional spending in 2021-22. The NPIF supports the Government's ambition of increasing R&D investment in the economy to 2.4% of GDP by 2027.

3.62 ISCF is currently funding eight challenges that support clean growth. These include Faraday Battery Challenge, Prospering from the Energy Revolution, Transforming Construction, Transforming Food Production, Industrial Decarbonisation, Smart Sustainable Packaging, Manufacturing Made Smarter and Transforming Foundation Industries.

3.63 **The Contracts for Difference scheme**: Introduced in GB in 2014, the CfD scheme is the UK Government's main mechanism for supporting new low carbon electricity generation projects. The scheme has been a success, delivering substantial new investment and helping deliver significant reductions in the cost of some renewable technologies. Renewable generators located in the UK that meet the eligibility requirements can apply for a CfD by submitting what is a form of 'sealed bid'.

3.64 CfD is Government's main mechanism for supporting low-carbon electricity generation. Renewable generators located in the UK that meet the eligibility requirements can apply for a CfD by submitting what is a form of 'sealed bid'. There have been three auctions, or allocation rounds, to date, which have seen a range of different renewable technologies competing directly against each other for a contract. Successful developers of renewable projects enter into a private law contract with the Low Carbon Contracts Company (LCCC), a Government-owned company. Developers are paid a flat (indexed) rate for the electricity they produce over a 15-year period; the difference between the 'strike price' (a price for electricity reflecting the cost of investing in a particular low carbon technology) and the 'reference price' (a measure of the average market price for electricity in the GB market).

3.65 Projects currently supported by the CfD scheme are expected to provide around 16GW of new renewable electricity capacity by 2025 from a range of technologies. The next CfD allocation round is planned to open in 2021, and the UK Government plans to hold further auctions around every two years after that.

3.66 Further information on the UK's approach to investment-related policy on the low carbon and energy transition is set out in chapter 4.

Devolved administrations

Northern Ireland

Research and innovation

3.67 Through the work of Matrix, the Northern Ireland Science Industry Panel, the Department for Economy (NI) has identified a series of strategic opportunities for focussed investment in R&D and skills. For example, Matrix in partnership with the Alan Turing institute undertook an analysis of research capability in Artificial Intelligence in the Northern Irish universities. This found that there is sufficient capability to make a case for an AI Centre of excellence at the heart of an AI cluster in Northern Ireland.

3.68 In addition, Northern Ireland departments through the Small Business Research Initiative are encouraging the development of new products and services to address public sector needs, including the use of AI to improve the energy efficiency of water treatment systems.

3.69 Further information on NI's approach to investment-related R&D policy is set out in chapter 4.

Housing

3.70 The Northern Ireland Executive is committed to delivering social and affordable housing. As detailed in previous NRPs, our housing programme is delivered via a comprehensive package of measures aimed at creating the right conditions for a stable and sustainable housing market as well as increasing access to affordable housing for those seeking to enter home ownership. In the absence of Ministers, this work continued in 2019.

3.71 In January 2020, the New Decade, New Approach agreement committed the Northern Ireland Executive to deliver a programme of actions to enhance the supply of social and intermediate housing, as follows:

- by augmenting the Programme for Government outcomes framework with a new outcome and indicators to provide specific focus on ensuring every household has access to a good quality, affordable and sustainable home that is appropriate for its needs
- enhancing investment in new social home starts
- bringing forward legislation which is urgently needed to reclassify Housing Associations as external to the public sector to ensure the continuation of new social house building and the Co-ownership Housing Scheme
- examining options to remove historical debt from the Northern Ireland Housing Executive (NIHE) and exclude it from having to pay Corporation Tax
- agreeing a long-term trajectory for the rental charges of the NIHE. This must be sufficient to support the long-term future of the NIHE's social housing stock for future generations of tenants. This must also always provide demonstrably affordable rents to tenants
- introduction measures including, where necessary, legislation to provide for controls to ensure affordability

3.72 Our future housing policy will be focused on delivering against this programme of actions.

3.73 The budget priorities of the Executive for 2020/21 and beyond will establish what this commitment means, but clearly these priorities should reflect the commitment to increase investment above current levels.

Training and improving skills

3.73.1 The Northern Ireland Administration is currently implementing major reforms to the locational education and training system. Details of the reforms are set out in Securing our Success[4], the Northern Ireland Apprenticeship Strategy published in June 2014, and Generating our Success[5], Strategy for Youth Training published in June 2015. Both of these strategies are strongly evidence based, informed by consultation and are widely endorsed.

3.73.2 A key policy focus is placing local employers at the heart of provision. To this end, an employer-led Strategic Advisory Forum and Sectoral Partnerships have been established ensuring that employers play a central role in policy development and design of curriculum and delivery.

3.73.3 The Strategic Advisory Forum provides a forum for stakeholders, in particular employers and employer groups, to engage at a strategic level with government in the provision of apprenticeships and youth training. This includes offering advice and guidance on current

[4] https://www.economy-ni.gov.uk/sites/default/files/publications/del/Securing%20our%20Success%20The%20NI%20Strategy%20on%20Apprenticeships.pdf
[5] https://www.economy-ni.gov.uk/sites/default/files/publications/del/youth-training-strategy.pdf

provision, funding and support and future policy development to ensure that vocational and educational training systems continue to deliver the maximum benefit for employers, participants, and the economy. In early 2019, four sub-groups were established to consider a range of areas in greater detail namely addressing barriers for employers, enhancing communication, public sector apprenticeships and entry level provision.

3.73.4 Higher Level Apprenticeships were introduced at Levels 4 and 5 in September 2017, with Level 6 and 7 September 2018. The phased implementation plan is on schedule to deliver the reformed vision for Apprenticeships and Youth Training by 2021.

3.73.5 From September 2020, Northern Ireland plans to introduce a new high quality vocational education and training programme at Level 2 which will include structured work-based learning and numeracy & literacy qualifications with the aim of a 5 GCSE equivalent outcome. The programme will allow young people, who are not yet in employment secure the skills and qualifications necessary to succeed in their preferred sector or progress to higher levels of education.

3.73.6 A new programme, *Skills for Life and Work*, is currently being developed for delivery in September 2020 to better meet the needs of the changing cohort of young people who are accessing existing youth training programmes. Skills for Life and Work delivers on a key commitment in 'Generating our Success', the Youth Training Strategy for NI, that young people who have not ready for a Traineeship will be supported to achieve a full Level 1 qualification (defined as 4 GCSEs at D – G). The programme has been informed by substantial co-design activity and the delivery model will enable ongoing design work and lessons from delivery to inform the programme over the next three years.

Box 3.A: Northern Ireland stakeholder focus

Sectoral Partnerships have been established across key sectors to inform apprenticeship pathways, content and curriculum. These Partnerships take an employer-led approach to reforming, designing, developing and agreeing the provision of apprenticeships and youth training from Level 2 to Level 8 for specific occupations. Membership also includes representatives from the further and higher education sectors, industry experts and policy advisors. Ten Sectoral Partnerships are in place with a further nine due to be established.

The Department has worked extensively with key stakeholders including young people, the Community and Voluntary Sector, current European Social Funded programmes, Youth Workers and Social Services to develop and finalise the design of the Skills for Work and Life programme. Using a strong co-design ethos across an extensive network of stakeholders has enabled the development of genuinely user focused solutions based upon practitioner experience.

3.74 A key priority for the Northern Ireland Executive is the implementation of the Count, Read: Succeed Strategy to ensure that children and young people in Northern Ireland have the knowledge, skills and attitudes to succeed and do well in work and in life. It has a specific focus on improving outcomes in the key skills of literacy and numeracy.

3.75 The Work Experience Programme, introduced in August 2015 and planned to run until at least 2020, offers high quality work experience placement opportunities to job-ready unemployed customers. From 1 April 2017– 30 September 2018, 127 young people participated in the Work Experience Programme. Of these, 52 (41%) found employment within 13 weeks of completing their placement.

3.76 The Northern Ireland Executive, in partnership with the Irish Government, has secured EU PEACE IV (2014-20) funding to deliver the cross border Peace4Youth programme which will closely align in Northern Ireland with the vision and objectives of "Together: Building a United Community" United Youth. The programme will target 7,400 14–24 olds who are disadvantaged, excluded or marginalised; have deep social and emotional needs; and are at risk of becoming involved in anti-social behaviour, violence or paramilitary activity. The objective is to enhance the capacity of children and young people to form positive and effective relationships with others of a different background and make a positive contribution to building a cohesive society.

3.77 A total of 11 lead delivery organisations, along with a Quality & Impact Body to support the projects, have been appointed, and implementation commenced in late 2017. The independent evaluation of Phase 1 (October 2018) was highly positive with the majority of indicators under the main outcome areas (good relations, personal development and citizenship) showing clear progression for young people. Almost 80% of the young people surveyed indicated they were going to progress to education, training, employment or voluntary/community engagement, and almost 90% had gained a qualification in at least one area. Phase 1 of the Programme concluded in early 2019, and Phase 2 will run sequentially until December 2021. Further evaluations will take place in late 2020 and 2022.

3.78 Further information on NI's approach to investment-related employment policy is set out in chapter 4.

Sustainable transport

3.79 The Northern Ireland Executive continues to drive a range of actions which, in building regional and local connectivity, aim to increase the use of public transport and facilitate modal shift to more sustainable travel options, including encouraging the uptake of walking, cycling and use of greenway schemes. These include:

- the Belfast Rapid Transit programme with the Glider service using 40% more fuel efficient vehicles with reduced nitrogen oxides and particulate matter
- the development of additional Park and Ride facilities in line with the 2019-2022 Strategic Park and Ride Delivery Programme
- the Belfast and North West Multi-modal Transport Hubs which provide enhanced passenger facilities and improved connectivity to incentivise more sustainable options
- improving and creating additional walking and cycling infrastructure and Greenways
- investment with Translink in a sustainable bus replacement programme to replace older vehicles with cleaner, more fuel-efficient buses
- supporting the commercial introduction of Ultra Low Emission Vehicles as a cleaner alternative to conventionally fuelled vehicles, including the pilot of an all-electric bus and, with funding from Office for Low Emission Vehicles (OLEV), three hydrogen buses
- working with councils to develop Local Transport Plans to encourage the designation of zones for development that incorporate sustainable transport options and multi-modal urban transport schemes

Low carbon and energy transition

3.80 The 2010 Northern Ireland Strategic Energy Framework set the direction to 2020. The Department for the Economy is currently progressing the development of a new longer-term energy strategy to cover the period 2020 to 2050 within the context of net-zero emissions by 2050. As the energy vectors, heat, power and transport are currently (2017 figures) responsible for 64% of all GHG emissions, the new strategy will be a key component in how the Executive responds to the challenges of climate change and the ambition to develop a low carbon economy. A new strategy will be subject to ministerial and Executive approval.

3.81 Further information on NI's approach to investment-related policy on the low carbon and energy transition is set out in chapter 4.

Scotland

Housing

3.82 The Scottish Government's target, over the current Parliamentary term, is to deliver 50,000 affordable homes, including 35,000 homes for social rent – a 75% increase on our previous social rent target. This ambitious plan has been backed up with investment of over £3.5 billion – the single biggest investment in, and delivery of, affordable housing since devolution.

3.83 Over £826 million is available through the Affordable Housing Supply Programme (AHSP) Budget this year. This will increase by £17 million to £843 million for 2020-21. The Scottish Government has also provided a commitment of £300 million interim funding certainty for 2021-22 ahead of the spending review later this year.

3.84 Through the Affordable Housing Supply Programme, the Scottish Government has various housing initiatives designed to increase the number of affordable homes for rent or purchase which will benefit rural Scotland. Subsidy levels take into account the additional cost of delivering homes in rural, remote and island areas.

3.85 The Scottish Government's investment in affordable housing supports between 10,000 and 12,000 full-time equivalent jobs in the construction and related industries in Scotland, leveraging economic output in the region of £1.4 billion per year.

Training and improving skills

3.86 Following the conclusion of the Enterprise and Skills Review in 2017, the Scottish Government has established an Enterprise and Skills Strategic Board. The Board's role is to align and co-ordinate the activities of Scotland's enterprise and skills agencies, in order to maximise the impact of the collective investment that Scotland makes in enterprise and skills development, and to create the conditions that are conducive to delivering inclusive and sustainable growth.

3.87 The Board's membership reflects a wealth of business and public experience, encompassing a broad range of sectors, sizes and locations. In October 2018 the Board published its full Strategic Plan, *Working Collaboratively for a Better Scotland,* outlining a series of actions for Scotland's enterprise and skills agencies aimed at driving productivity and inclusive growth. The Board's Export mission has been closed following the successful launch of the *Trading Nation: Export Growth Plan* and the Future Skills mission has been instrumental in informing the Scottish Government's Future Skills Action plan.

3.88 Developing the Young Workforce (DYW) is Scotland's youth employment strategy. Through DYW, we aim to reduce youth unemployment levels by 40% by 2021.

3.89 The strategy aims to create an enhanced curriculum offer for young people in schools, colleges and to increase opportunities for employment. It does this by bringing together schools, colleges, training providers and employers to promote the pathways young people need to participate in current and future work opportunities. This includes creating new work-based learning options; enabling young people to learn in a range of settings in their senior phase of school; embedding employer engagement in education; offering careers advice at an earlier point in school; and introducing new standards for career education and work placements.

3.90 The DYW Programme's headline target, to reduce youth unemployment in Scotland excluding those in full-time education, by 40% by 2021, continues to be met, having originally been achieved in May 2017.

3.91 The Scottish Government is delivering more **Apprenticeships** in Scotland than ever before with a record number of starts in 2018/19 and over a quarter of a million Modern and Graduate Apprentices across this administration (278,500 from April 2007 – March 2019) and remain on track to achieve 30,000 new apprenticeship starts by 2020/21.

3.92 Official Modern Apprenticeship statistics published on 11 June 2019 showed that there were 28,191 starts in 2018/19, including 921 Graduate Apprenticeships. As well as growing the Modern Apprenticeship programme, the Scottish Government is committed to enhancing and widening our Scottish Apprenticeship family, ensuring that more people than ever before can benefit from work-based learning. The expansion of Foundation and Graduate Apprenticeships is key to delivering this vision, as is the additional support we're offering to rural areas, and to key sectors.

3.93 Our commitment to equality of opportunity in apprenticeships is set out in Skills Development Scotland (SDS) Apprenticeship Equalities Action Plan (EAP), which was published in December 2015. This publication makes clear the interventions we will make to increase the numbers of underrepresented groups in apprenticeships and to tackle gender segregation where it exists. The EAP Year 3 Update outlined progress to date and details SDS focussed activity for 2019-20. This update was published on the 29 July 2019 and incorporates Foundation and Graduate Apprenticeships.

3.94 Further information on Scotland's approach to investment-related employment policy is set out in chapter 4.

Sustainable transport

3.95 The Scottish Government recognises the key role that sustainable and lower carbon transport can play in Scotland's transition to a net-zero emissions society. That's why the Budget 2020/21 sets out over £1 billion per annum to support public and sustainable transport to encourage people onto public transport and active travel modes. The Scottish Government is progressing a bold set of commitments, including:

- phasing out the need for new petrol and diesel cars and vans by 2032
- investing £500 million to improve bus priority infrastructure and tackle congestion
- providing concessionary travel for older and disabled people, with plans to introduce companion cards for eligible disabled children aged under 5 and extend the scheme to recipients of the Young Carer Grant during 2020-21
- reviewing options for extending public transport concessions to people under 26, with a commitment to report on progress during 2020-21
- Budget 2020/21 commitment in principle to a National Concessionary Travel scheme offering free bus travel for 18s and under. The Scottish Government will undertake work on design and due diligence with a view to introducing such a scheme in January 2021

- Budget 2020/21 commitment on £23.9 million for direct local authority investment in active travel, taking total investment in active transport in the next financial year to £100.5 million
- decarbonising passenger rail services by 2035, with a strategy to be published in coming months
- Budget 2020/21 on extra £5 million to develop enhanced rail services
- making a further £17 million available for zero-interest loans to support the purchase of ultra-low-emission vehicles
- working to decarbonise flights within Scotland by 2040
- Budget commitment to make available a new additional £2 billion of infrastructure investment over the next parliamentary term for measures to support the delivery of the Climate Change Plan update (not just transport). Further detail will be provided in the Infrastructure Investment Plan later this year

3.96 The National Transport Strategy (NTS) – launched in February – takes Scotland further, embedding climate action as a core principle within the Scottish Government's direction for Scotland's transport over the next two decades. The NTS promotes a sustainable travel hierarchy and looks at behaviour change and how to best manage demand, which are unavoidable areas as the Scottish Government strives to reach Scotland's targets and help address the climate emergency.

Wales

Housing

3.97 The Welsh Government has set a target for the number of additional affordable homes in Wales of 20,000 including 6,000 through the Help to Buy – Wales scheme during the term of this Government (2016-2021). In the last 5-year administration (2011-2016), 11,508 additional affordable homes were delivered against a target of 10,000. The Welsh Government is allocating over £1.7bn to support the achievement of the target and a substantial proportion of these homes will continue to be supported through the Social Housing Grant programme.

3.98 The Welsh Government is also providing a long-term revenue stream, the Housing Finance Grant (HFG) which is delivering 1,000 new affordable homes in its first phase. Under the current administration, a second phase of HFG will deliver a further 1,500 affordable new homes. It is also anticipated that 1,000 of the 20,000 homes will be built utilising new innovative design models and a £20m programme in the next two years has been established to support its delivery.

3.99 The Land for Housing Scheme, piloted in 2014-15 by the Welsh Government, provides loan funding to Registered Social Landlords to support housing delivery through securing land supply. The scheme helps to tackle the problem of limited supply of housing by increasing the funding options available to RSLs in respect of land sites for affordable and/or market housing development. In addition to supporting the development of new homes, the investment also provides jobs and training opportunities, boosts the local economy, and regenerates brownfield sites and neglected land. A total of £32 million has been made to date with a further £10 million being invested in 2017/18.

3.100 As well as continuing to support those in greatest need of housing, the Welsh Government also operates the Help to Buy – Wales initiative. The first phase of the scheme supported the construction of over 4,600 new homes. To date, 75% of Help to Buy – Wales investment has supported first time buyers. A second phase of the Help to Buy – Wales scheme is underway; it will see an investment of £290 million until 2021, with the aim of supporting the construction of over 6,000 additional new homes.

Training and improving skills

3.101 'Taking Wales Forward', the Welsh Government's programme for government, sets out key measures to prevent young people from disengaging from learning and helps support them with entry to the labour market.

3.102 Jobs Growth Wales II, launched in April 2015, is a project which aims to create 9,000 job opportunities across Wales over 3 years. The programme is aimed at job-ready, unemployed young people aged 16 to 24, giving them valuable work experience for a 6-month period, paid at or above the national minimum wage for between 25 and 40 hours per week. Employers are reimbursed 50% of the young person's wages. The ambition of the programme is that job opportunities are sustained by the employer after the 6-month period of support has ended.

3.103 As at 10 September 2019 for JGW II, 7,197 jobs have been created with 3,989 jobs being filled since April 2015. 86% of those individuals that have completed the programme have progressed into sustained employment, an apprenticeship or further learning.

3.104 Jobs Growth Wales forms part of a wider progression route within Welsh Government-funded employability support. Participants of the Traineeships programme can progress directly into a Jobs Growth Wales opportunity where appropriate. Additionally, after six months an eligible young person can progress to an Apprenticeship opportunity.

3.105 Welsh Government Skills Policy is aimed at aligning apprenticeships to the needs of the Welsh economy so that the skills system is responsive to industry changes that enable Wales to compete globally through having workers equipped with high level technical and professional skills. The Welsh Government's strategy is to invest in training which will provide economic and social returns, investing in growth sectors and occupations to address skill shortages and gaps that hold back productivity and growth. The Welsh Government is working with employers to expand and strengthen routes in STEM, the digital industries, information technology, construction and financial services.

3.106 In February 2017, the Welsh Government published its Apprenticeships Skills Policy, *Aligning the Apprenticeship model with the needs of the Welsh economy*, which responds to these challenges; not only is the Welsh Government committed to delivering a minimum of 100,000 quality all age apprenticeships over the current Assembly term, it will prioritise investment in:

- addressing skill shortages through developing apprenticeships in growth sectors and emerging occupations in line with priorities determined by Regional Skills Partnerships (RSPs)
- developing higher level skills - focusing on apprenticeships at level 3 and above particularly in science, technology, engineering and professional routes, where returns tend to be higher
- increasing the take-up of apprenticeships amongst 16-19-year olds, reflecting Welsh Government commitment to supporting younger apprentices
- delivering a larger number of apprenticeships through the medium of Welsh and/or bilingually

- maintaining the three-nation policy approach to UK-wide National Occupational Standards to provide portability/transferability of occupational competence

3.107 We are improving the quality of apprenticeships by implementing new arrangements to develop, issue and raise awareness of apprenticeship frameworks to meet individual and employer needs. To support this new process, the Wales Apprenticeship Advisory Board (WAAB) has also been established to provide advice and recommendations on apprenticeship frameworks to be developed, including simplifying the architecture for occupational sectors and pathways for apprenticeships in Wales.

3.108 RSPs are at the centre of the Welsh Government's Skills Policy. Over the next five years, the Welsh Government plans to deliver a post-16 learning environment which remains fit for purpose and sets Wales ahead of other nations of the UK and internationally. To achieve this they are taking a longer term view of the strategic changes needed as set out in the Policy Statement for Skills. RSPs have a key role in producing regional intelligence informed by employers. As a result, they have developed robust employer engagement strategies to capture the skills needs of the region and in particular needs associated with regional infrastructure projects and priority sectors. The care sector has been identified as a priority sector by RSPs and care related skills intelligence is being captured in annual regional employment and skills plans, which in turn will inform the prioritisation of funding.

3.109 Skills competitions play a vital role in raising standards, esteem and levels of expertise in further education and apprenticeships. Through skills competition activities, the Welsh Government will benchmark Wales against the best in the UK and the rest of the world. Wales has been looking at skills excellence in other countries, and evidence suggests that the strongest vocational systems offer a wide range of opportunities to apprentices and young people leaving sixth form.

3.110 The Traineeships Programme (for 16 to 18 year olds), started in August 2011, supports young people to gain sustained employment by helping them with their confidence and motivation, and looks to address barriers to learning – all of which may prevent a young person moving into employment or learning at a higher level. The programme seeks to improve skills levels through National Vocational Qualifications (NVQs) in chosen occupational areas, and progress young people into employment, or learning at a higher level.

3.111 The Welsh Government's Project Output Reports indicate that as at March 2018, 70% of leavers from the Traineeship Programme had a positive progression. Welsh Government published statistics show that 74% of Traineeship leavers had a positive progression during the 2017/18 academic year.

3.112 The Welsh Government's current adult employability programme, the Employability Skills Programme (ESP), provides support to unemployed adults to get a job and to stay in work by improving their employability skills. The core content of the programme is a high-quality work placement or employer specific training which is combined with work preparation training and essential skills provision if required. The programme is aimed at unemployed adults who have a reasonable chance of being ready for employment within 6 months.

3.113 ReAct is a Welsh Government programme that provides support to people across Wales who are affected by redundancy and need help finding another job. It is available to anyone under formal notice of redundancy or made redundant in the last three months. It provides vocational training support and a wage subsidy as well as support with searching for jobs, writing a CV, preparing for an interview and building self-confidence.

3.114 Taking Wales Forward sets out the Welsh Government's programme to drive improvement in the Welsh economy and public services, for the next five years. The Employability Plan, Economic Action Plan and 'Education in Wales – Our National Mission' strategies guide how we tackle education, skills and employment levels in Wales and tackle opportunity, equality and prosperity for all. They also deliver the operational framework to guide cross-government policy development, implementation and monitoring.

3.115 The cross-cutting national strategy, 'Prosperity for All', commits the Welsh Government to reconfigure its current employability offer so that it is simpler and more responsive to the needs of individuals and employers. The new Working Wales advice service was launched in May 2019 to achieve this end, and has so far supported just over 23,000 adults, and 5,000 young people to date.

Sustainable transport

3.116 The Welsh Government has accepted the advice of the UK Committee on Climate Change (UKCCC) that we increase Wales's 2050 emissions reduction target to 95% and will ask the National Assembly to put this into law next year. We have also announced our ambition to work with UKCCC and other stakeholders to develop a more ambitious net zero target.

3.117 Last year we published 'Prosperity for All: A Low Carbon Wales' which set out over a hundred policies and proposals covering emitting sectors in Wales including transport. Our transport actions are focused on encouraging a modal shift to active travel and public transport and promoting the uptake of zero emission vehicles. Our ambitions for zero emission bus and taxi/private hire vehicle by 2028 were reiterated. Transport decarbonisation will also be a key theme in the Welsh Government's new Transport Strategy, which is set to be published towards the end of 2020. At 6.7 MtCO2e, transport accounted for 16% of Welsh emissions in 2017, and is our third largest GHG emitting sector, following the power sector and the business and industry sector. Although vehicles are increasingly efficient, we are also travelling more, so overall transport emissions in Wales have not seen a major reduction since the 1990 baseline, declining by 5% to 2017. Road transport accounts for 86% of transport emissions in Wales.

3.118 We are working with Transport for Wales and the wider public sector to increase the number of electric vehicle chargers. This includes the provision of rapid chargers on the strategic road network utilising a £2 million budget commitment. The scope of this work has now been expanded to lever in private sector funding for rolling out electric vehicle chargers at railway stations, and chargers at public car parks. Expanding the scope of the scheme should result in a much higher number of installations. We have committed to developing an Electric Vehicle Charging Strategy for Wales in 2020 which will scope out the context for further Welsh Government intervention in the provision of electric vehicle charging infrastructure. We have committed £29 million to promoting the uptake of zero emission vehicles in the draft budget for 2020/2021

3.119 Over the last two financial years we have seen a significant increase in the funding available to create and improve active travel infrastructure. For 2019/20, with an in-year capital boost, we have allocated over £44 million to local authority active travel schemes in Wales, equating to around £14 per head. In addition to this, we are currently investing around £1.75 million in walking and cycling training and promotion per year and this will increase to around £1.9 million next year. Since December 2018, all local authorities have plans in place for integrated active travel networks for the 142 largest settlements in Wales. In 2018 the Active Travel Fund was established to create these networks.

3.120 We support the view expressed in the UK Rail Industry Decarbonisation Taskforce Report that the removal of diesel only passenger trains from the national rail network by 2040 and the whole industry contributing to the Government's net zero carbon target by 2050, is achievable. Our investment programme in the Wales and Borders Rail Service will bring about a step-change improvement for users. By December 2023 an extra 285 (29%) more services every weekday will be operational. The acquisition of new rolling stock will improve the environmental performance of the railway in Wales. Electrified lines and new rolling stock will result in a 25% reduction in CO_2 emissions across the rail network.

3.121 Reversing the decline in bus patronage is a key priority for the Welsh Government. Between December 2018 and March 2019, we consulted on the Improving Public Transport White Paper, which set out proposals for improving the legislative framework for how local bus services are planned and delivered. Over 60 electric buses will soon be operational in south Wales following successful bids to the Office of Low Emission Vehicles' Ultra Low Emission Bus Scheme. The operation of these buses will offer useful insights into practical delivery issues and public perceptions as well as reducing air pollution.

3.122 The latest edition of Planning Policy Wales (PPW) was issued in December last year and gives increased emphasis to sustainable transport, including ensuring the location and design of new development reduces the need to travel and prioritises walking, cycling and public transport. PPW aims to ensure new development creates the right environments and infrastructure to make it easier for people to walk and cycle. It fully integrates the provisions of the Active Travel Act with the planning system and requires provision for active travel to be an essential component of development schemes.

4 Performance and transparency

Introduction

Planning and performance framework

4.1 The government aims to be a world leader in performance management, and the most open and transparent government in the world. In February 2016, the government launched a new performance framework, with each department producing a Single Departmental Plan (SDP). Summaries of the plans are published online and performance data is updated as new information becomes available.

4.2 Each departmental plan is written with the support of HM Treasury, the Cabinet Office, the government Functions and the Prime Minister's Office. They provide a comprehensive, forward-looking picture of each department's objectives, priorities and public commitments. Plans are aligned with every department's funding settlement.

4.3 Departmental plans are also supported by output and outcome indicators that will be used by government and the public to track how the department is performing. Where targets already exist, they have been clearly described. However, no new targets have been designed as part of the planning process.

4.4 Accountability for delivering services and policies is clear and transparent. Within each published plan, every departmental objective has a stated minister and lead official, who are accountable for delivering that area of policy.

4.5 The government continues to develop tools to make data more transparent, such as the data.gov.uk portal. Detailed data on transactional spend is also made available through Spend Reports.

4.6 In November 2017, the government welcomed a report led by Sir Michael Barber in to improving the public value delivered by the UK public sector. Based on the recommendations of this report, HM Treasury are embedding the Public Value Framework (PVF) across government to maximise the value which is delivered from public spending. As part of PVF, HM Treasury announced at Spending Round 2019 that the government is developing real-world priority outcomes for public services and metrics for driving progress in them. We plan to continue to integrate the PVF, including priority outcomes and metrics once these are finalised, into existing planning processes (such as SDPs) and across the public sector more widely.

4.7 Spending Round 2019 delivered the fastest planned increase in day-to-day departmental spending in 15 years, and set out a £13.8 billion (4.1% real terms) increase in resource spending from 2019-20 to 2020-21. This Government will continue to transform the UK economy through the Budget in March and the Comprehensive Spending Review (CSR), which will set out the path of public spending beyond 2020-21, later this year. Through the CSR, we will embed a relentless focus on delivery, performance and outcomes to help every pound of taxpayers' money spent make a meaningful difference in people's everyday lives.

Europe 2020 Strategy

4.8 Europe 2020 is the European Union's growth strategy for 2010 to 2020 for a smart, sustainable and inclusive economy[1]. Objectives have been set in the 5 following areas: employment, education, social inclusion, innovation and climate/energy. The strategy is to be underpinned by concrete actions at EU and national levels.

4.9 The government continues to support the aims of the Europe 2020 Strategy, of encouraging a return to strong and sustainable economic and employment growth across the EU. However, the government's position remains to not set a significant number of top-down targets as a performance management tool.

4.10 The following section reports the UK's approach to the national monitoring and actions taken in support of the 5 headline targets of Europe 2020, agreed by the European Council in June 2010:[2]

- aiming to raise to 75% the employment rate for women and men aged 20 to 64, including through the greater participation of young people, older workers and low-skilled workers and the better integration of legal migrants
- improving education levels, in particular by aiming to reduce school drop-out rates to less than 10% and by increasing the share of 30 to 34 years old having completed tertiary or equivalent education to at least 40%
- promoting social inclusion, in particular through the reduction of poverty, by aiming to lift at least 20 million people out of the risk of poverty and exclusion
- improving the conditions for research and development, in particular with the aim of raising combined public and private investment levels in this sector to 3% of GDP; the Commission will elaborate an indicator reflecting R&D and innovation intensity
- reducing greenhouse gas emissions by 20% compared to 1990 levels; increasing the share of renewables in final energy consumption to 20%; and moving towards a 20% increase in energy efficiency

4.11 For each EU level target, it sets out:

- the EU level target, the relationship to the Treaties, and the Integrated Guidelines
- the government's objective
- the actions the government and the devolved administrations are taking towards meeting the objective

4.12 The levels of performance, against the objectives set by each target, are indicated in Annex A.

Devolved administrations

4.13 The devolved administrations have, in some instances, a different approach to performance management and transparency, and where this is the case it has been detailed below.

[1] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:2020:FIN:EN:PDF

[2] http://ec.europa.eu/eu2020/pdf/council_conclusion_17_june_en.pdf. More background on Europe 2020 targets at: http://ec.europa.eu/europe2020/europe-2020-in-a-nutshell/targets/index_en.htm

Northern Ireland

4.14 The focus of the Northern Ireland Executive's work is on: "improving wellbeing for all - by tackling disadvantage and driving economic growth". At the heart of the approach are stated outcomes of population wellbeing, with progress towards achieving the outcomes being measured primarily through a series of population level indicators.

Scotland

4.15 Progress towards the ambitions set out in Scotland's Economic Strategy is measured through the new National Performance Framework (NPF). The NPF sets out a collective purpose for Scotland, a values statement and 11 interconnected National Outcomes for creating a more successful country through increased wellbeing and sustainable and inclusive economic growth. It includes 81 national indicators which underpin the outcomes and track progress in achieving these outcomes over time. The Framework's Outcomes are aligned with the UN's Sustainable Development Goals, and meaningful action under the NPF will allow Scotland to play its part in achieving these Global Goals by 2030. The National Outcomes include:

- having a globally competitive, entrepreneurial, inclusive, and sustainable economy
- that we are open, connected and make a positive contribution internationally
- that we have thriving and innovative businesses, with quality jobs and fair work for everyone

Wales

4.16 The Welsh Government will publish an annual report of its progress towards meeting the Government's well-being objectives at the heart of the strategy in accordance with requirements under the legislation. The Welsh Government is committed to communicating progress on a regular basis, providing evidence of the impact that it is making and will review the national strategy at mid-term as part of keeping the well-being objectives under review.

Employment

> **June 2010 European Council conclusions:**
>
> Aiming to raise to 75% the employment rate for women and men aged 20 to 64, including through the greater participation of young people, older workers and low-skilled workers and the better integration of legal migrants.

Relevant Treaty base: Article 148 of the Treaty on the Functioning of the EU, Integrated Guideline 7.

Government objective

4.17 The overall role of the UK Government in the labour market is to encourage flexibility, efficiency and fairness. In order to meet its objectives, the government continues with active policies to improve the functioning of the labour market, reduce unemployment and in-work poverty, alongside action to create a competitive and stable business environment.

4.18 The latest national data shows that the government has now achieved its previous employment targets with an employment rate at a record 76.6% (for age group 16-64 for Dec 2019-Feb 2020). However, the government is committed to not only helping people into work, but ensuring that there are opportunities for progression for those in low-wage jobs. Through the introduction of Universal Credit, the government intends that people will be further encouraged to remain in work and progress to higher paid positions.

Policy context

4.19 The UK labour market is flexible and dynamic, with almost 13 million moves in and out of employment, unemployment and inactivity each year. There were over 6.92 million job starts in the last year, and over 3.4 million job exits. Even in recessions most of these movements into and out of work are for reasons other than redundancy.

4.20 The UK's labour market objectives are to:

- facilitate the smooth and effective functioning of the labour market, speeding up job matches, addressing mismatches in supply and demand
- tackle worklessness and out of work poverty, reducing inactivity and promoting sustained employment
- reduce in-work poverty, promote social mobility, reduce individual dependence and state expenditure on benefits through more or better work

4.21 Labour market interventions to achieve these objectives can be grouped into 4 main areas:

- activation strategies aim to maximise labour supply by drawing people closer to the labour market as a condition of benefit. This may involve work-availability and work-search requirements, backed up by sanctions for non-compliance
- the Public Employment Service (JobCentre Plus) offers job-matching with employers and a personalised tailored regime for claimants
- interventions to raise employment levels among specific groups. Passive use of the design of working age benefits to avoid distorting the labour market
- passive use of the design of working age benefits to avoid distorting the labour market

4.22 The UK economy has grown 16.7% since Q1 2010 and is now 10.6% higher than its pre-crisis peak. For the period [December November 20198 -– February January 202019], unemployment was at 1.36 million, down 112,000 on the year, down 1.1 million since 2010. Inactivity fell 0.45 percentage points on the year to 20.27% - a new record low.

4.23 The latest national data show the UK is now above its pre-recession employment rate at a record high of 76.6% (for age group 16-64 for December 2019-February 2020). Employment has increased by over 4.0 million since February-April 2010, to over 33.1 million – a new record - and by 352,000 between the 3 months to February 2019 and the 3 months to February 2020 alone.

4.24 The female employment rate (72.7% for age group 16-64) is at a record high, while the female employment level is at a record high of 15.7 million – up over 2.0 million since2010.

4.25 Eurostat data (as of March 2019) for the UK in Q3 2018 show an employment rate of 74.7% for age group 15-64. This is 5.7 percentage points above the EU-28 average, and the 7th highest employment rate in the EU.

Actions to achieve objectives

Universal Credit and progression

4.26 Universal Credit, the new benefit to support those who are on a low income or out of work, is being implemented as planned. Roll-out across Great Britain was achieved by the end of 2018. Universal Credit strengthens the effectiveness of the government's labour market policies. It removes the distinctions between benefit types, in and out of work benefits, and the worst dis-incentives to progression of the former system, so that work clearly pays.

4.27 The government is very keen to see progression in work by people on Universal Credit, and is pursuing deeper understanding of the future in-work Universal Credit population and how best to design and deliver effective interventions to support them in progression in-work. In October 2019 the government published further findings from its large-scale 'Universal Credit: In-Work Progression Randomised Control Trial'. An £8 million programme of research and analysis, test and trials, is now intended further to develop the evidence base to help understand what works best to support people to progress in work. The developing programme includes the Future Cohorts Study, a large-scale survey and qualitative research study focussed on those who will move on to Universal Credit in the future.

4.28 Better labour market outcomes for people in groups that have historically faced barriers to having a job have been part of the overall success in employment growth. The Government is keen to build on this to ensure that all those who want to participate in the labour market are able to do so.

Youth obligation programme

4.29 On 11 October 2019, the Government announced an extra £3.5 million funding for the Jobcentre Plus Support for Schools programme. The programme supports schools in England to meet their duty to provide high quality, independent and impartial careers advice to pupils aged from 12 to 18 years of age who are at risk of becoming Not in Employment Education or Training (NEET) or facing potential disadvantage in the labour market.

4.30 This demand-led programme is aimed at facilitating an effective transition from school into work, training or further study. DWP is working in close partnership with the Careers & Enterprise Company, the National Careers Service and the National Apprenticeship Service to ensure alignment with other organizations working in the careers sector.

4.31 The extra funding will enable up to 90 more Jobcentre Schools Advisers to meet current and future demand from schools in England. In addition to meeting demand, advisers will also look to provide support to young people with special educational needs and disabilities up to age 24 in Further Education establishments.

4.32 The Youth Obligation Support Programme supports young claimants (aged 18-21) and is now available in every jobcentre. The programme begins with a curriculum of workshops and exercises to encourage young people to think more broadly about their skills and job goals. Work coaches help them identify any training they need, and support them to improve their job search, job application and interview skills. There is also work-focused coaching and referral to additional support from a wide range of locally available provision.

4.33 Participants still unemployed after 5 months have an extended assessment to review their learning and progress, and to identify any additional barriers to work that can quickly be solved. After 6 months, the young person is offered a sector based work academy placement, or encouraged to take up a traineeship, apprenticeship, equivalent which combines vocational training with work experience. Alternatively, a 3 month work experience placement is offered to participants aged 18 to 21-year-old on the programme who do not take up work-related training.

4.34 The Government published data in July 2019 which shows:

- there were at least 63,000 participants between October 2018 and April 2019
- almost 2 in 3 claimants who complete the programme find work
- over half of participants who find work, do so within 2 months

Box 4.A: Mentoring circles

DWP set out in a skills deal working alongside local authorities, for example with the West Midlands Combined Authority (WMCA), to tackle skills challenges in the region. This included a commitment from DWP to work collaboratively on a joint 12-month initiative to support the West Midlands Mayor's promise to tackle high volumes of youth unemployment.

A small team was established to work with disadvantaged young people aged 16-24. Typical characteristics of eligible young people suitable for the support includes: young offenders; poor or no work history; low educational attainment; disability; alcohol and/or substance misuse; and care leavers.

In January 2019, the then Minister for Employment announced the national roll-out of the mentoring circles initiative and the extension from the ethnic minority community to all young people who would benefit from such support.

Mentoring Circles support young people aged 16-24, giving them an opportunity to build on their employability skills through facilitating an interaction with employers. Following the roll-out this is now available in jobcentres nationally.

Flexible Support Fund (FSF).

4.35 For 2019-20 a budget of £40 million is available for this locally managed discretionary fund enabling Jobcentre staff to buy goods or services for extra tailored support to improve individuals' employment prospects. The fund can be used for:

- removing barriers: A key element of the Flexible Support Fund is giving Work Coaches the means to support people moving into work or training, e.g. helping with: advance costs for childcare and accommodation; travel to interviews; clothing, tools and equipment; and training or education which enables people to move into sustained work or closer to the labour market

- Grant Funding / Partnership working: Partnership grants provide support for local partnership working which tackles local worklessness and multiple barriers to employment in a co-ordinated way. The aim is to influence commonly agreed local priorities, and to align and perhaps pool funding with local partners

New Enterprise Allowance (NEA)

4.36 This programme is now extended to 2021, paying an allowance worth up to £1,274 to those who start a new business through the NEA. It provides expert mentoring and financial support to people and want to start their own business. The NEA provides self-employment support to both those who been on benefits who want to become self-employed, and to Universal Credit recipients with existing businesses whose business income is low. The realities of running a business are explained to applicants to enable informed choice before embarking on the programme. Once accepted the recipient is helped to write business plan, with mentoring support for up to 12 months.

Older workers

4.37 The number of people aged 50 years and over in employment is at a record high of 10.7 million, an increase of 2.59 million over the last 10 years. This increase in older worker employment has been predominately driven by the changes in the female employment rate over time. The employment rate for women aged 50-64 increased by 16.7 percentage points from 51.8% in Dec-Feb 1999 to 68.6% in Dec-Feb 2020.

4.38 To help older people return to work, Jobcentre Plus has a network of older claimant champions in each of the Jobcentre Plus districts. These work to raise the profile of older claimants across Jobcentre Plus work coaches and providers to promote to employers the advantages of employing older workers.

Homeless people

4.39 The government announced at the September 2019 Spending Round funding for DWP to carry out additional outreach activities to tackle homelessness. As a result of this funding, Jobcentres will benefit from up to £3 million in 2020-2021 to bolster outreach activities to help those who are homeless, including rough sleepers. This money will help people access benefits, stabilise their lives and move into work.

Devolved administrations

Northern Ireland

4.40 The main return to work programme in Northern Ireland, ‘Steps 2 Success,’ introduced in October 2014, builds on the success of previous return to work programmes with an increased emphasis on sustaining employment. Formal programme statistics, based on paid outcomes, are published by independent statisticians on a quarterly basis. The most recent statistical bulletin was published on 28 November 2019.

4.41 At the end of September 2019, a total of 58,814 people had started the programme. Of those who started the programme between October 2014 and September 2017, 30% (13,704) have moved into employment. Of those who started the programme between October 2014 and September 2018, 30% (15,772) have moved into employment. Of those who started the programme between October 2014 and March 2018, 20% have sustained work for 6 months (which equates to 66% of those who moved into work). Of those who started the programme between October 2014 and September 2017, 15% have sustained employment for 12 months (which equates to 51% of those who moved into work).

4.42 In addition, the Social Investment Fund (SIF) is an Executive Fund which aims to make life better for people living in targeted areas by reducing poverty, unemployment and physical deterioration. The programme is scheduled to run through to March 2021 with funding being spent on community-based initiatives, designed to bring the maximum benefit to local people and their communities.

4.43 A key objective of the fund is to increase employment opportunities by addressing educational underachievement, lack of skills, and access to jobs. All Social Investment funding has now been committed to 65 projects across Northern Ireland, including £20 million to employment / training projects. There are nine employment projects, of which eight have now completed with very positive employment outcomes for those engaged. Additionally, the Building to Employment project, although primarily education focused, included an employment strand.

Scotland

4.44 The Scotland Act 2016 devolved employment support powers to Scotland, which are now being delivered from April 2018 through Fair Start Scotland (FSS). FSS is a voluntary service focused on people who are further removed from the labour market, and has core values of treating people with fairness, dignity and respect. FSS is an important first step towards the Scottish Government's vision of joined-up, flexible and responsive employability support in Scotland. Delivering devolved employability services on an ongoing basis is now a cornerstone of employability support in Scotland.

4.45 Fair Start Scotland continues to support people in their journey towards and into work with 19,003 people joining the service in its first 21 months of delivery. To date, over 5,000 participants have started a job after joining FSS with more participants still being supported towards employment. The early evaluation of the service indicates that participants welcome the support offer and that the overriding principles of dignity and respect are demonstrable in the service offer. Specifically, the evaluation found that:

- 92% of people who have used the service feel they were treated with dignity and respect
- 80% felt they had a choice about the type of support they received
- 78% felt the support offered improved their quality of life and wellbeing

4.46 The Scottish Business Pledge (SBP) is a values-led partnership between government and business that is based on boosting productivity, competitiveness and inclusive growth through fairness, equality and sustainable employment and business practices. It is a free-to make, voluntary commitment bringing together elements that have been shown to improve productivity and competitiveness and build sustainable growth that also achieves fairness, equality, opportunity and innovation.

4.47 In October 2019 the Business Pledge was updated in response to business feedback during a 2018 review. The refreshed Business Pledge aims to improve its scale and impact, more closely align with the principles of Fair Work and provide better support for our existing Business Pledge companies.

4.48 Under the new structure there are three core (mandatory) elements:

- payment of the Real Living Wage
- no inappropriate use of Zero Hours Contracts (language changed in response to business feedback)
- action to address gender pay gap (proportionate to size of the company)

4.49 A new menu approach allows businesses to tailor their Business Pledge relevant to their size and sector, by committing to any 5 of the following 7 elements according to their particular sector:

- Investing in a skilled and diverse workforce (previously gender balance)
- Workforce Engagement, offering an effective voice to workers
- Environmental Impact.
- Prompt Payment
- Innovation
- Internationalisation
- Playing an active role in the Community

4.50 The SBP has grown steadily since its launch in 2015 and currently over 735 companies have made their commitment across a range of sectors.

Wales

4.51 In 2014, the Welsh Government published its Policy Statement on Skills which identified the key challenges for Wales in delivering a highly skilled and productive workforce for the future. The challenges identified in that statement remain the driving force behind Welsh Government employment and skills policy. The commitments made as part of Taking Wales Forward – the Welsh Government's Programme for Government (2016 – 2021) were expanded upon in the Government's national strategy 'Prosperity for All' and have placed the emphasis on a series of overarching aims to deliver more and better jobs, through a stronger, fairer economy, improve and reform public services, and build a united, connected and sustainable Wales.

4.52 Underpinning the national strategy is the Economic Action Plan, published in December 2017, which contains actions that will work to grow the economy and reduce inequality. This is supplemented by the Employability Plan published in March 2018. This Plan sets ten-year targets in relation to economic inactivity and unemployment rates, and skills levels. It outlines an inclusive and individualised approach to supporting people into employment, particularly those further from the labour market and facing multiple barriers to accessing work. The Plan also calls on employers to do more to upskill and develop their workforce, in recognition that the aging population and radically changing world of work will require a culture of lifelong learning and adaptability to new roles.

4.53 The Welsh Government is also developing employability programmes which are accessible to all and will undertake an equalities review of its core provision to ensure that their operations are inclusive and sensitive to the needs of people with protected characteristics. The Welsh Government will closely examine the impact of its actions on women, disabled people and Black, Asian and Minority Ethnic (BAME) people.

4.54 The Welsh Government operates a regionally-based demand led system to inform Skills delivery and are working with internal and external stakeholders to ensure better alignment of policies and activities. This is overlaid with intelligence from three Regional Skills Partnerships who provide a 3-year Employment and Skills Plan for the region, updated on an annual basis with new LMI and specific recommendations for delivery. The Regional Skills Partnerships engage with local employers, training providers (schools, further education, higher education and work-based learning) and other regional stakeholders, to articulate the specific skills needs of the region based on company activities and strategic projects including large infrastructure projects. This intelligence is used to influence change in commissioning of training and skills development so that the people of the region are better equipped to meet the local job opportunities.

4.55 Prosperity for All, the national strategy for Wales, identifies employability and skills as one of its five priority areas; this is reflected in the updated Employability Plan published in March 2019. To drive forward these commitments, the Welsh Government is developing a new Employment Advice Gateway. This Gateway will provide impartial and cohesive employability advice to people aged 16 and older. Based on a detailed assessment of the customer's needs and circumstances, the Gateway will refer people to the most suitable support; this could be Working Wales, Communities for Work, or other support.

Education

June 2010 European Council conclusions

Improving education levels, in particular by aiming to reduce school drop-out rates to less than 10% and by increasing the share of 30 to 34 years old having completed tertiary or equivalent education to at least 40%.

Relevant Treaty base: Article 165 of the Treaty on the Functioning of the EU, Integrated Guideline 9.

Government objective

4.56 Our vision is to provide world-class education, training and care for everyone, whatever their background. It will make sure that everyone has the chance to reach their potential, and live a more fulfilled life. It will also create a more productive economy, so that our country is fit for the future.

4.57 Education and skills are a devolved competence, with each of the administrations making their own policy decisions. The following sections focus on the Government's policies in England. Information on the approach taken by Northern Ireland, Scotland and Wales is included later in this chapter.

Policy context

4.58 The following principles are cross-cutting and shape strategy development through to delivery:

- ensuring our academic standards match and keep pace with key comparator nations
- striving to bring our technical education standards in line with leading international systems

Actions to achieve objective

Delivering T Levels

4.59 T levels are new two-year technical study programmes for 16-19-year olds from September 2020 – 80% classroom based and 20% on a substantial industry placement, with more hours of study per year than current programmes. There is a phased rollout, the first three T Levels from 2020, seven more from 2021, further 15 in 2022 & 2023.

4.60 Providers have been selected for first delivery of T levels in 2020 and 2021; this approach will continue for 2022. Awarding organisations have been appointed for first 10 T Levels. There will be continued roll-out of funding, c.£60m per year, to help providers develop their capacity to source and support substantial industry placements and deliver these to current students to develop their skills and employability as well as to prepare the way for T Levels.

4.61 The Education and Training Foundation is providing an £8 million professional development offer for teachers and leaders to help them prepare. £38 million of capital funding is available for 2020 providers. A communications campaign launched in October 2019. There is ongoing training of careers advisers and careers leaders and Ofqual and IfATE have collaborated voluntarily to develop the quality assurance and regulation framework for T Levels.

4.62 The first stage of our consultation on qualifications at level 3 and below closed in June 2019, and we are considering the responses in preparation for the next stage of consultation in 2020.

4.63 Around £100 million of revenue funding will be spent in 2020-21 to deliver and support T Levels, plus the £38 million capital funding for investment in the facilities and equipment to deliver the first T levels.

4.64 In Schools our priorities are:

- ensure there are sufficient high-quality teachers in our schools for the long term, by delivering our teacher recruitment and retention strategy which includes our Early Career Framework
- support schools to get the best out of their budgets, improving school resource management, providing more advice, support and deals for schools
- elevate the status of our teaching profession; including by strengthening qualified teacher status, and reducing unnecessary workload

Teacher recruitment and retention strategy

4.65 In January 2019 the Department for Education's Recruitment and Retention Strategy was published.

4.66 Teaching remains an attractive and rewarding career. This year (2019/20) we recruited 34,543 trainee teachers – in line with the previous year. Postgraduate recruitment is at its highest level since 2011/12, with 29,580 postgraduate trainees recruited in 2019/20. The overall vacancy rate continues to be low, at only 0.3% of all teachers as at November 2018.

4.67 Developments in 2019-20 include:

- in May 2019 we announced a £10 million investment to establish 'behaviour hubs' so that schools with a track record of effectively managing pupils' behaviour can share what works with schools that need it. The first hubs are expected to launch in September 2020 and will run for an initial period of 3 years
- a Teaching Vacancies site is now available across the country, a free jobs listing service that will directly save schools money. Over 60% of eligible schools have now signed up to use the service. Schools spend up to £75 million on advertising their vacancies each year, so there are significant savings to be made in this area

Phased Bursaries

4.68 The Department for Education is offering a phased bursary for new chemistry, languages, mathematics and physics teachers starting initial teacher training in 2020/21. This is comprised of a £26,000 bursary during training followed by three early-career payments totalling £6,000 in their second, third and fourth years of teaching. Those teaching in 39 local authority areas that we have identified as having high need for teachers will receive higher payments totalling £9,000.

4.69 This builds on the phased bursary we previously piloted for mathematics teachers and the commitment we made in the teacher recruitment and retention strategy to reform bursaries more widely to follow this phased payment approach.

Curriculum Fund

4.70 In January 2018, the Department for Education committed £7.7 million over five years to the Curriculum Fund to reduce unnecessary workload in curriculum planning and resourcing.

4.71 We launched the curriculum programme pilots in July 2018 and this was available to all schools with high quality complete curriculum programmes. The pilots are trialling a total 15 complete curriculum programmes in history and geography at key stage 2, and history, geography and science in key stage 3, with 11 lead schools working with around 90 participant schools.

4.72 On 11 October we announced an extension of nine Curriculum Fund pilots for up to an additional two terms, after initial research showed almost half of teachers said that their workload had decreased within the first few months of the pilot, saving teachers time from creating schemes and lesson plans from scratch.

4.73 The lead pilot schools and their timeframes can be found at https://www.gov.uk/government/publications/curriculum-fund-programme-pilots-list-of-lead-schools/curriculum-fund-programme-pilots-list-of-lead-schools-and-related-information

4.74 A research programme is running in tandem with the pilots and is looking at how complete curriculum programmes can reduce teacher workload in the mid- to long-term. The findings will inform further policy development on how we can best reduce teacher workload across further subjects and key stages.

Early Career Framework (ECF)

4.75 The Early Career Framework (ECF) will underpin an entitlement to a funded two-year support package for early career teachers, providing them with the early career support enjoyed by other top professionals.

4.76 For national roll-out in September 2021, we have committed to:

- funding and guaranteeing 5% off-timetable in the second year of teaching for all early career teachers; early career teachers will continue to have a 10% timetable reduction in their first year of induction
- creating high quality, freely available ECF curricula and training materials
- establishing full, high quality ECF training programmes
- funding time for mentors to support early career teachers and funded mentor training

4.77 By the time the new system is fully in place, we anticipate investing an additional £130m every year to support ECF delivery in full.

4.78 We continue to work with the profession as we proceed with the development and delivery of these proposals. This includes introducing the ECF and support for early career teachers from September 2020 in Bradford, Doncaster and Greater Manchester and the North East.

4.79 In October, we announced providers that have been selected to produce the initial range of fully funded materials and training programmes for early roll-out. These products will offer best practice in delivering support to early career teachers against each area of the Early Career Framework. Providers will produce and deliver these programmes through a range of regional delivery partners.

4.80 Schools within early roll-out areas who opt in will have the opportunity to have early access to this support. They will be able to help iterate and improve provision to ensure it meets the needs of early career teachers and their mentors.

Widening Access to Higher Education

4.81 The UK exceeds the target for the share of 30-34-year olds with tertiary educational attainment (48.8% ET Monitor 2019). Record high rates (33.7%) of 18-year olds are also entering Higher Education (HE). However, widening access and participation in HE is a priority. The Government wants to unlock the potential of all young people with the ability to succeed at University. Progress has been made: in 2018 English disadvantaged 18-year olds were 52% more likely to go to university than in 2009.

4.82 The application rates for disadvantaged 18-year olds in the UK have been increasing since 2012. 18-year olds living in the most disadvantaged areas of England were 59% more likely to apply to higher education in 2019 than in 2009. However, the figure is still far lower than 18-year olds from more affluent backgrounds, with the difference mainly driven by the gap in prior educational attainment.

4.83 The Higher Education and Research Act (2017) introduced a number of measures aimed at encouraging more people from all backgrounds to consider higher education and to support their success:

- the Act has now established the **Office for Students (OfS)** which will have a statutory duty to promote equality of opportunity in access and participation for all students. Higher education providers will be required to look at student progression as part of their Access and Participation Plans as well as access
- within the OfS, we expect the **Director for Access and Participation** to negotiate the Access and Participation Plans which higher education providers must have in place before they can charge students fees of more than the basic amount. These plans set out the actions being taken to encourage students from all backgrounds to participate and succeed in higher education
- the Act introduced a **Transparency duty** to shine a light on institutions that need to go further in widening access and improving success for all students. Higher Education providers have been required to publish their respective student application, offer, acceptance and dropout and attainment rates broken by gender, ethnicity and socio-economic background since August 2019

Devolved administrations

Northern Ireland

4.84 The Northern Ireland Executive has six Corporate Goals in relation to Education which include: improving the wellbeing of children and young people, raising standards for all, closing the performance gap, and increasing access and equality. Its key policy for raising standards is "Every School a Good School", a policy for school improvement which aims to ensure that every young person fulfils his or her full potential at each stage of their development. The policy aims to ensure that every school through self-evaluation and targeted support, encompasses the characteristics of a successful school, namely one that is effectively led and child-centred, provides high quality teaching and learning and is connected to its local community.

4.85 A key priority for the Northern Ireland Executive is to address educational underachievement linked to poverty. Work is at an early stage to explore what more can be done to ensure that all children and young people, regardless of background, can reach their full potential.

4.86 To help give all children the best start in life, the Northern Ireland Executive invests in a range of universal and targeted early years intervention programmes including the universal Pre-school Education Programme, the Getting Ready to Learn programme; and the targeted Sure Start Programme, Pathway Fund and Toybox project. Core and capital funding is also provided to support the early years sector.

Childcare

4.87 The first phase of the Northern Ireland Executive's Childcare Strategy was launched in September 2013 and comprised 15 Key First Actions to address the main childcare priorities that had been identified through an initial phase of consultation and research. The full Northern Ireland Executive Ten-Year Childcare Strategy is subject to Executive approval.

Box 4.B: Northern Ireland stakeholder focus: Miss School = Miss Out Strategy

The NI Executive's improving Pupil Attendance Strategy "Miss School = Miss Out", launched in 2016, is an overarching framework designed to maximise the attendance of pupils at school. In consultation with a number of schools facing significant challenges linked to poverty / socio-economic disadvantage, the Department of Education (together with Queens University Belfast) developed a good practice case studies document. "The Challenge of Improving Pupil Attendance at School" outlined how schools can improve their pupil attendance levels. Ten schools provided details of the range of interventions that they introduced and what lessons they have learnt from these initiatives. Our hope is that these will be useful to other schools facing similar challenges.

Scotland

4.88 The Scottish Government recognises the importance of a skilled, educated and healthy workforce, and believes that investing in education and skills is key to driving long-term improvements in competitiveness and in creating opportunities for everyone in society to benefit from these improvements.

Scottish Attainment Challenge

4.89 The Scottish Government's Scottish Attainment Challenge continues in 2020-21, aiming to achieve equity in educational outcomes with particular focus on closing the poverty related attainment gap. It is backed by the £750 million Attainment Scotland Fund (ASF) over the course of the current parliament, prioritising improvements in literacy, numeracy and health and well-being for pupils impacted by socio-economic disadvantage. As part of this, in 2020-21, every local authority area in Scotland will for a fourth year benefit from £120 million of Pupil Equity Funding which will be allocated directly to over 95% of schools based on estimated free school meal registrations. In addition, over £60 million from the ASF will be assigned to Scottish Attainment Challenge programmes to provide targeted support to specific Scottish Attainment Challenge authorities and schools in areas with high levels of deprivation; to care experienced children and young people; and fund a number of national programmes including support for staffing supply and capacity, professional learning and school leadership.

Education Maintenance Allowance

4.90 The Scottish Government has retained the Education Maintenance Allowance (EMA) in Scotland to provide financial support to eligible 16 to 19-year olds from the lowest income families, enabling them to stay in education and learning beyond the school leaving age. In January 2016, the programme was expanded to include part time non advanced college courses and the income thresholds were increased. 29,135 school pupils and college students received EMA payments in Scotland in the academic year 2017-18. The total amount spent on EMA payments in 2017-18 was £23 million. Of this, £15.7 million (68.41%) was paid out to school pupils, £6.6million (28.7%) paid out to young people attending college and £0.7 million on young people on activity agreements.

Supporting students and widening access

4.91 The Scottish Government is committed to developing a highly-skilled and educated workforce, and is taking steps to ensure that people from all backgrounds have the support to reach their full potential, including:

- in further education, full-time students are currently able to receive a means tested non-repayable bursary of up to £104.65 per week. The 2019-20 FE student support budget is at a record high of over £122 million in bursaries, childcare and discretionary funds

- the Scottish Government is committed to providing student support. The current higher education funding package includes an annual minimum income of £7,750, through a combination of bursaries and loans, for students with a family income of less than £21,000, and a student loan of £4,750 a year, which all students are eligible for. Part-time students with a personal income of less than £25,000 are eligible to receive a grant towards tuition-fee costs

- eligible students undertaking taught and research postgraduate courses up to full Masters level in Scotland can apply for a tuition fee loan of up to £5,500, in addition to a living cost loan of up to £4,500. Over the academic year 2018-19, £894.3 million of student support, covering tuition fees, grants, bursaries and authorised loans, was allocated through the Student Awards Agency Scotland (SAAS) to 148,890 full-time higher education students

- we have consistently invested over £1 billion annually in our higher education sector since 2012-13 and ensuring that access to higher education remains free for eligible Scottish and EU domiciled students this is set to continue in 2020-21

Supporting older learners

4.92 Older learners are well-represented amongst all college students. Nearly half (49.5%) of enrolments on part-time college courses were aged 25 and older in 2018-19. The proportion of learning hours (credits) delivered to students aged 25 and over has increased to 31.5% in 2018-19 – up 1.1 percentage points on the previous year.

4.93 The Scottish Funding Council's Outcome Agreements ask colleges to remove barriers and support full participation and successful outcomes for all groups of learners in their local community.

4.94 Older learners in further education are benefitting from record levels of support. The 2019-20 budget of over £122 million in college bursaries, childcare and discretionary funds is a real-terms increase of 44% since 2006-07.

Wales

4.95 The Welsh Government's Youth Engagement and Progression Framework, published in October 2013, is a systematic, multiagency approach to reducing the number of young people not in education, employment or training (NEET) or at risk of becoming NEET. Local authorities co-ordinate the support young people need to aid their progression through education and training into employment. This is being delivered through a systems-based approach to early identification of need, co-ordinated brokerage of support and tracking of the young person's progress.

4.96 Provisional figures from the Welsh Government revealed that 23,225 learning programmes were started by apprentices in Wales (at levels 2 to 4 and above) in 2015/16, compared with 19,505 in 2014/15, 27,485 in 2013/14, 28,030 in 2012/13 and 17,910 in 2011/12.

4.97 The Welsh Government's published statistics show that 31,360 learning programmes were started by apprentices in Wales (at levels 2 to 4 and above) in 2017/18, an increase of 30% on 2016/17.

Social exclusion and poverty reduction

June 2010 European Council conclusions

Promoting social inclusion, in particular through the reduction of poverty, by aiming to lift at least 20 million people out of the risk of poverty and exclusion.

The population is defined as the number of persons who are at risk-of-poverty and exclusion according to three indicators (at-risk-of poverty; material deprivation; jobless household), leaving Member States free to set their national targets on the basis of the most appropriate indicators, taking into account their national circumstances and priorities.

Relevant Treaty base: Article 156 of the Treaty on the Functioning of the EU, Integrated Guideline 10.

Government objective

4.98 The UK Government is committed to a long-term approach to tackling poverty with a focus on improving the underlying structure of the economy and reforming the welfare system so that it works with the tax system and the labour market to support employment and higher pay. This is based on evidence of the increased risks of low-income among workless households; for example, working age adults in households where all adults are in work are around six times less likely to be in relative low income than adults in households where nobody works. And children in workless households are around four times more likely to be in low income after housing costs than those where all adults work.

4.99 Supporting employment has also been viewed as key to ensuring better long-term child outcomes based on evidence that children in working households have better educational and employment outcomes. Children in workless families are almost twice as likely as children in working families to fail at every stage of their education. This approach is approach is underpinned by two statutory measures of parental employment and children's educational attainment. The UK Government has also set out (in Improving Lives: Helping Workless Family, 2017) seven further non-statutory indicators to track progress on other areas that can affect disadvantaged families and children. In addition, the government publishes annual data on low-income households (drawn from the Households Below Average Income survey) in line with its statutory commitment to do so. Measures to tackle poverty and disadvantage through the provision of social security benefits remain the responsibility of the UK Government in Great Britain including Universal Credit which is the main support available to families with children. Social Security in Northern Ireland is a devolved matter, though its provision generally mirrors that of Great Britain. Various areas of essential and ancillary support services in this area may be the responsibility of Devolved Administrations in Scotland and Wales.

Policy context

4.100 The UK entered 2020 with a robust labour market. Figures for March showed over 3.9 million more people in work than a decade before with the employment rate at a joint record high of 76.5%. This means that there were around 743,000 fewer children in workless households compared with 2010. Over 80% of employment growth in the UK since 2010 has been in full-time work. The latest official statistics show that between 2017/18 and 2018/19 – a year of relatively high inflation and flat average incomes – the proportion of people in relative low income and absolute low income remained the same on both a before and after housing costs basis. Furthermore, compared with 2010 there are 100,000 fewer children in absolute low income.

4.101 Against this background, the thrust of policy is to continue to pursue further improvement through better opportunities throughout people's lives. Universal Credit is designed to promote full-time work and employment for partners where possible, through smoother incentives to increase hours. Support for families and the most vulnerable is being enhanced.

Actions to achieve objective

Welfare reform

4.102 Against a background of increasing employment levels, the government continues to tackle barriers to inclusive employment, with targeted measures for those who face particular difficulty in improving their situation through work. The government's programme for welfare reform, in particular Universal Credit, helps families improve their situation. Extra resources are being made available to enhance support through Universal Credit, especially for the most vulnerable.

4.103 The government has committed an extra £4.5 billion to Universal Credit, to ensure that vulnerable claimants and families are supported in the transition to Universal Credit, and that millions of people keep more of what they earn. An extra £1.7 billion a year has been put into work allowances in Universal Credit, increasing them by £1000 from April 2019. This strengthens work incentives and boosts the incomes of the lowest paid.

4.104 From April 2020, Local Housing Allowance rates in Universal Credit will be uprated by 1.7% in line with wider benefit uprating, and the government has announced an extra £40 million in Discretionary Housing Payments for 2020/21, helping to tackle the most acute affordability pressures in the private rented sector.

4.105 The Spending Review 2019 earmarked £23 million to develop measures to improve services and support for the most vulnerable. Of this, £10 million will be allocated to a transition fund for outreach programmes to support vulnerable people in Universal Credit. Development is underway, and from April 2020 the fund is accessible available to partner organisations, including charities.

Devolved administrations

Northern Ireland

4.106 The Northern Ireland Administration published an Outcomes Delivery Plan (June 2018) as the basis for a cross-departmental work programme. The Plan's starting point was the framework of outcomes that had been developed by the Northern Ireland Executive in 2016 in order to deliver its agreed objective of Improving wellbeing for all – by tackling disadvantage and driving economic growth. Indicators associated with this delivery plan include the percent of the population living in absolute and relative poverty (before housing costs). A report on the progress of the Delivery Plan was published in 2019.

4.107 The 'New Decade, New Approach' agreement (January 2020) references that the immediate priorities for the Executive should include "Delivering a fair and compassionate society that supports working families and the most vulnerable and that the Executive will develop and implement an Anti-Poverty Strategy." The agreement also aims to improve wellbeing for all – by tackling disadvantage and driving economic growth on the basis of objective need.

4.108 A co-design, co-production approach will be taken to the development of the Anti-Poverty Strategy. The 'New Decade, New Approach' agreement also references that a Child

Poverty Strategy would underpin a new Programme for Government. The most recent NI Executive Child Poverty Strategy was published on 25 March 2016. The Strategy aimed to reduce the number of children in poverty and reduce the impact of poverty on children. The Strategy stated 'We want all of our children and young people to fulfil their potential. We want them to learn and achieve, to be healthy, to be safe and feel safe, free from poverty, living in decent homes, in stable communities and in environments that are welcoming. The 2018/19 Annual Report on the Child Poverty Strategy, setting out the measures taken across departments, was published in March 2019. The 2019/20 Annual Report will also be published.

Neighbourhood Renewal

4.109 *People and Place: a Strategy for Neighbourhood Renewal* targets those communities throughout Northern Ireland suffering the highest levels of deprivation. It aims to reduce the social and economic inequalities which characterise the most deprived urban areas. It does so by making a long-term commitment to communities to work in partnership with them to identify and prioritise needs and coordinate interventions design to address the underlying causes of poverty.

4.110 The Strategy currently has a revenue budget of £18.06 million and annual capital budget of around £4 million. It currently supports over 300 projects across 67 geographically deprived areas, targeting around 16% of the Northern Ireland population.

Social Supermarkets

4.111 The Northern Ireland Executive is running a Social Supermarket Pilot Programme in response to the Welfare Reform Mitigations Report which includes the requirement to tackle food poverty in Northern Ireland by "improving access to affordable food through a network of community shops and Social stores/Supermarkets".

4.112 A Social Supermarket provides clients with access to food whilst requiring them to take up a wraparound of services. It is hoped that rather than an emergency short term response, a Social Supermarket model can provide people with a pathway out of poverty by recognising that food is only one factor and access to and uptake of a wraparound service to address advice needs, training and skills may provide a holistic approach to a transition out of poverty.

4.113 Core to the Social Supermarket model is access criteria to ensure it works with those most in need, support for a time limited period to prevent dependency, and that a financial transaction in the form of a small membership fee is paid to access.

4.114 Action to Date:

- the programme launched in October 2017 and five pilot sites are in operation across Northern Ireland
- all members of the Social Supermarkets complete entry and exit questionnaires to track the impact of their involvement with the project. Evaluation of this data up to September 2019 has shown positive impacts on individual's financial position, healthy eating and self-efficacy
- the reach of the programme has included 892 social supermarket members with estimated reach of 2,230 individuals based on average household size of 2.5. In excess of 112 tonnes of surplus food has been redistributed which would have otherwise gone to waste

4.115 A rolling evaluation of the programme up to September 2019 has indicated that there is high demand for this model and that the support is reaching those who could be considered to be particularly vulnerable and in need of support. In light of this, the pilot programme has approval to run up to end of March 2020 and the Minister is considering the evaluation results and options for any future delivery.

Welfare Reform Mitigations

4.116 The NI Executive has funded mitigation schemes for families with children that experience a financial loss as a result of welfare reform. The mitigation payments are available for the period May 2016 to March 2020. The New Decade, New Approach Deal that was agreed by the local political parties has committed to an extension of this mitigation measure beyond March 2020.

4.117 An Independent Working Group was commissioned to make recommendations on the Welfare Reform Mitigations. As recommended by the Group, the Northern Ireland Executive provides mitigation payments to families with children who are affected by the Benefit Cap (introduced in NI on 31 May 2016). These payments are generally equivalent to the initial capped amount and will be payable until March 2020 provided the household continues to be affected by the Benefit Cap. The amount of the payments can change if there is a relevant change of circumstances. At September 2019 a total of £8.6 million had been paid to eligible families. Annual reports can be viewed online.

Make the Call Wraparound

4.118 The Northern Ireland Executive continues to develop and evolve the service provided to customers, working towards a person-centred approach to place the needs of the customer at the centre of interventions and building on a partnership approach.

4.119 The ‘Make the Call’ Wraparound Service provides free and confidential benefit entitlement checks as well as advice and warm referrals to a range of other supports and services. Community outreach officers also conduct home visits for vulnerable people providing face to face assistance and support.

4.120 As a result of this work, in 2018/19, 9,340 people benefited from additional benefits of £43.2m. The Make the Call Wraparound Service continues to work towards a ‘once and done’ approach with customers, and includes, where appropriate, assistance with application completion by ‘Make the Call’ Advisors and Community Outreach Officers. In addition, the ‘Make the Call’ Wraparound Service is developing strategic partnership arrangements across government, and with Statutory Agencies and the Advice and Community Sectors.

4.121 The Social Investment Fund (SIF) is an £80 million Executive Fund which aims to make life better for people living in targeted areas by reducing poverty, unemployment and physical deterioration. The programme is scheduled to run through to March 2021 with funding being spent on community-based initiatives designed to bring the maximum benefit to local people in deprived communities. All Social Investment funding has now been committed to 65 projects across Northern Ireland. These include 46 capital projects which are delivering improvements to 107 premises and 19 revenue projects delivering benefits to local communities. 34 capital projects (91 premises) and 18 revenue projects are now completed delivering outcomes that will improve social inclusion.

Scotland

4.122 The Scottish Government is committed to ensuring that economic growth is inclusive and is shared across all of the people and parts of Scotland. This approach – which includes investing in the early years, promoting fair work and protecting households from current economic pressures – is embedded in the foundations of Scotland’s Economic Strategy.

4.123 Tackling poverty and inequality is central to what the Scottish Government is seeking to achieve. In October 2016, the Scottish Government published the Fairer Scotland Action Plan (FSAP), which sets out 50 actions we will take over this Parliamentary term to create a fairer, more equal country.

4.124 In December 2019 we published our third update on the FSAP, highlighting the considerable progress we continue to make. The latest report also takes a thematic approach to update on progress made in relation to the recommendations of the then Independent Advisor on Poverty and Inequality, Naomi Eisenstadt, in her reports '*Shifting the Curve*' and *'The Life Chances of Young People in Scotland'*.

4.125 Key highlights in the progress report include:

- investment of £3.3 billion in affordable housing to deliver our commitment of 50,000 affordable homes, including 35,000 for social rent by 2021

- the Money Talk Team has supported low income households to maximise their income, ensuring they are claiming all the benefits they are entitled to and not spending more on essential services. 5,242 households are better off by over £10 million, averaging £1,940 each

- the new Best Start Grant (BSG) means a two-child family will receive £1,900 compared with £1,400 Sure Start Maternity Grant it replaces

- enacting ambitious fuel poverty legislation, setting statutory targets to reduce fuel poverty alongside our commitment of £0.5 billion over four years to 2021 to tackle fuel poverty and improve energy efficiency

4.126 In March 2018 the Scottish Government published 'Every Child, Every Chance: The Tackling Child Poverty Delivery Plan 2018-22'. This is the first of three delivery plans which will be published by the Scottish Government in order to meet the ambitious targets set out in the Child Poverty (Scotland) Act 2017. The Plan sets out a range of actions aimed at meeting the targets by increasing family incomes and reducing household costs.

4.127 The first report outlining our progress was published in June 2019. The report shows that 48 of the 58 actions committed are either in progress or delivered; including:

- increasing the School Clothing Grant to a new minimum of £100 per child, in partnership with local authorities, benefitting 120,000 children each year

- making progress on the expansion of funded Early Learning and Childcare (ELC) to 1,140 hours by August 2020 and investing £3m over 2020-22 on an Access to Childcare Fund

- providing £750 million to the Attainment Scotland Fund in this parliamentary term to help close the poverty-related attainment gap in our schools. Since 2017-18, this Fund has included £120 million of Pupil Equity Funding every year

Social Security

4.128 The Scottish Government's Social Security (Scotland) Act 2018 was unanimously passed by the Scottish Parliament on 25 April 2018 and put in place the legislative framework to create a new social security system based on dignity, fairness and respect. Social Security Scotland officially became an executive agency of the Scottish Government on 1 September 2018.

4.129 The Scottish Government is responsible for 18 benefits. The Scottish Government will directly deliver 16 benefits through Social Security Scotland. These 16 benefits include 5 completely new forms of financial support.

4.130 The first benefit to be delivered by Social Security Scotland was Carer's Allowance Supplement, increasing Carer's Allowance by 13%. Around £320 million has been invested into Carer's Allowance and Carer's Allowance Supplement in 2019/20. The Supplement provided eligible carers with an extra £452.40 in 2019/20 compared to carers in the rest of the UK. Since the supplement launched, more than 98,000 carers have received the extra support.

Wales

4.131 The National Strategy, Prosperity for All, sets out the Welsh Government's programme to drive improvement in the Welsh economy and public services, delivering a Wales which is prosperous and secure, healthy and active, ambitious and learning, united and connected.

4.132 The First Minister has made it clear that addressing poverty and tackling inequality are fundamental to the purpose of this Government. Tackling poverty is the shared responsibility of every Minister.

4.133 Our Children and Families (Wales) Measure 2010 provides the statutory framework for tackling child poverty in Wales. The objectives of the Welsh Government's Child Poverty Strategy focus on those areas where we can have most impact with the levers available - reducing the number of children living in workless households, increasing the skills of parents and young people, reducing inequalities in education and health, reducing in-work poverty and action to increase household income.

4.134 The Strategy also identifies five priority areas where Welsh Government can do more to help improve the circumstances and outcomes of low-income families in the "here and now". These priorities focus on addressing food poverty, improving access to affordable childcare, housing and regeneration, reducing in-work poverty and mitigating the impacts of the UK Government's welfare reform.

4.135 The challenges we are facing as a country make it an appropriate time for us as a Government to review how we can develop a more compassionate, citizen-centred approach to tackling poverty, through continued cross-government activity. It is essential we use all the levers at our disposal to build greater resilience that will help support people and communities to meet the challenges ahead.

4.136 The First Minister gave a commitment in his manifesto to undertake a review of Welsh Government funded programmes and services to ensure they have maximum impact on the lives of families living in poverty. The review started in November 2019 and will complete at the end of March 2020 and will inform the Welsh Government's approach to tackling child poverty going forward.

4.137 The First Minister also made a commitment to enact Part 1 of the Equality Act 2010, the socio-economic duty. This will require Welsh public bodies to make decisions in a way that tackles unequal outcomes caused by socio-economic disadvantage. The purpose of the duty is to ensure specified public bodies, when making strategic decisions, such as deciding priorities and setting objectives, consider how their decisions might help to reduce the inequalities associated with socio-economic disadvantage.

4.138 In addition, the First Minister made tackling poverty a priority in the budget planning process for 2020-21. This has ensured that additional funding has been targeted at those programmes which will make a difference to the lives of children living in poverty.

4.139 Welsh Government also supports the delivery of a more generous 'social wage' which delivers cash equivalent services that have the effect of leaving money in the pockets of Welsh citizens, in a 'progressive universalism' approach. This can leave some Welsh families much better off than would otherwise be the case.

4.140 For example, we continue to provide financial assistance for those in crisis through our national Discretionary Assistance Fund (DAF). The programme has supported 259,700 awards to the most vulnerable people in Wales, with £52.4 million in grants since April 2013. In addition, our £244 million Council Tax Reduction Scheme means that one in five households benefit from a reduction in their council tax bill. In 2018-19, almost 280,000 vulnerable and low-income households in Wales continued to be protected from any increase in their Council Tax liability, of which 220,000 continued to pay no council tax at all, and in 2019-20 this support continued.

4.141 Welsh Government activity to support people into work has meant that since devolution, our economic inactivity rate has fallen by 5.1 percentage points, compared with a fall of 2.6 percentage points for the UK over the same period. The number of workless households in Wales has fallen by nearly 20% since 2004. Wales is maintaining an employment rate well above its historical average, with the level up over 267,000 since the start of the Assembly.

4.142 However, in-work poverty is growing and 67% of children living in poverty in Wales live in a household where at least one adult is in work. We are supporting working parents to increase their hours and helping second earners into work through our childcare Offer which provides 30 hours of Government-funded early education and childcare for children of working parents. A typical parent whose child is benefitting from 20 hours of childcare per week is getting the equivalent of an extra £90 per week in their pockets.

4.143 We have also accepted in principle the 48 recommendations of the Fair Work Commission and have accepted the definition of Fair Work - *where workers are fairly rewarded, heard and represented, secure and able to progress in a healthy, inclusive environment where rights are respected.* We are in the process of setting up a Social Partnership and Fair Work Directorate which will take forward the Commission's recommendations.

4.144 As part of this work we will continue to build on progress made across devolved public services, and promote the adoption of the Welsh Living Wage across the Welsh economy. This has the potential to improve levels of in-work poverty as one of a suite of policies aimed at increasing household income.

4.145 The Well-being of Future Generations (Wales) Act 2015 supports a national, all-Wales approach to tackling poverty and reducing inequalities. Under the Act, a set of 46 National Indicators for Wales will measure national progress towards achieving the seven well-being goals. These are reported on annually in the Well-being Wales report.

4.146 Since April 2019, the Welsh Government has rolled out a programme of Government-funded childcare for children aged 3 and 4 in Wales, providing 30 hours per week of combined early education and childcare for eligible children of working parents over 48 weeks of the year. The Welsh Government is committed to improving the support for families and the choices open to them when it comes to childcare. To this end, over the next ten years Wales is aiming to transform its early childhood education and care (ECEC) sector into a single consistent system of provision for 0-5-year olds. This system is founded on the understanding that children in their early years need the same support and nurturing regardless of the setting they attend.

4.147 The Welsh Government's ECEC approach seeks to ensure that provision is flexible and responsive to individual circumstances with a focus on settings best placed to deliver quality ECEC outcomes for children, moving away from artificial boundaries into a provider-neutral system. This will open up choice for parents and ensure that children are nurtured and supported to thrive in the early years.

4.148 The Welsh Government also has the opportunity to use the Well-being of Future Generations Act to support a national, all-Wales approach to tackling poverty and reducing inequalities. Under the Act, a set of 46 National Indicators for Wales will measure national progress towards achieving the seven well-being goals.

Research and development (R&D) and innovation

June 2010 European Council conclusions

Improving the conditions for research and development, in particular with the aim of raising combined public and private investment levels in this sector to 3% of GDP; the Commission will elaborate an indicator reflecting R&D and innovation intensity.

Relevant Treaty base: Article 121 of the Treaty on the Functioning of the EU, Integrated Guideline 4; and Article 173 of the Treaty on the Functioning of the EU.

Government objective

4.149 The 2017 Industrial Strategy set out the UK Government's approach to developing a modern industrial strategy with science, research and innovation at its core. The aim of the Industrial Strategy is to create an economy that boosts productivity and earning power throughout the UK. It has five key strands: ideas, people, infrastructure, business environment and places. It has also set out four Grand Challenges to put the UK at the forefront of the industries of the future and address global challenges: putting the UK at the forefront of the artificial intelligence and data revolution; maximising the advantages for UK industry from the global shift to clean growth; becoming a world leader in shaping the future of mobility; and harnessing the power of innovation to help meet the needs of an ageing society.

4.150 The ideas foundation sets out the government's overarching objective of making the UK the world's most innovative economy. Central to this is the commitment to raise total R&D investment to 2.4% of GDP by 2027 and to reach 3% of GDP in the longer term.

Policy context

4.151 The government is implementing the recommendations from the Nurse Review, led by Nobel Prize-winning scientist Sir Paul Nurse, through the creation of UK Research and Innovation (UKRI) in 2018. The review called on the government to "support the Research Councils to collectively make more than the sum of their parts" and develop a "smoother pathway to more applied research".

4.152 The continued success of government policies in terms of R&D and innovation is reflected in rankings that show that the UK is one of the most innovative countries in the world and has a disproportionate influence on global research. For example:

- the UK is a 'strong innovator' in the 2019 European Innovation Scoreboard and 17% above the EU average performance
- with less than one per cent of the world's population, the UK accounted for 4 per cent of researchers, 7 per cent of the world's academic publications, and 14 per cent of the world's most highly-cited academic publications in 2018

4.153 The UK Parliament and government have devolved certain powers and responsibilities to the Scottish Parliament and the Assemblies in Wales and Northern Ireland; and to their governments and executives. Whilst responsibility for the Research Councils and Innovate UK (now all under UKRI) rests with the UK Government, the Devolved Administrations also have important responsibilities for the funding of research, particularly in universities.

Actions to achieve objectives

Initial steps to meet 2.4% R&D target

4.154 The government is firmly committed to becoming a global science superpower and continuing to collaborate internationally on scientific research, and to reaching 2.4% of GDP investment in research and development by 2027

4.155 In successive Budgets in 2016 and 2017, the government set out increases in spending on R&D totalling £7 billion through to 2021-22.

4.156 At Budget 2020, the Chancellor announced that government investment in R&D will increase to £22 billion per annum by 2024/25. This landmark investment is the largest and fastest ever expansion of support for basic research and innovation and will accelerate progress, increasing investment in R&D to 2.4% of GDP by 2027.

4.157 Budget 2020 also announced a number of specific measures to boost spending on R&D in 2020-21, including up to £400 million for world-leading research, infrastructure and equipment and over £900 million to ensure UK businesses are leading the way in high-potential technologies, including commercialising nuclear fusion technology and supporting the Government's ambitious National Space Strategy and space innovation fund.

Establishing UK Research and Innovation

4.158 UK Research and Innovation (UKRI) was established in response to the recommendations of the Nurse Review and began operations on 1 April 2018.

4.159 UKRI brings together the seven Research Councils, Innovate UK, and Research England. UKRI's main purpose is to invest in and facilitate research and innovation activities across the UK. The organisation was set up to provide a joined-up, strategic voice for UK research and innovation, reducing administrative overheads and duplication whilst encouraging interdisciplinarity – thereby maximising value and benefit from HMT's investment of billions of pounds in research and innovation.

4.160 UKRI was responsible for spending around £7.5 billion in 2019/20, through research and innovation grants to academies and businesses; its own portfolio of 28 institutes, laboratories and research units; 10 catapult centres; core research and knowledge exchange grants to universities; and cross-disciplinary strategic research funding streams, e.g. Industrial Strategy Challenge Fund (ISCF).

4.161 UKRI's impact is focused on three elements – pushing the frontiers of human knowledge and understanding; delivering economic impact and social prosperity; and creating social and cultural impact by supporting our society and others to become enriched, stronger, healthier, more resilient and sustainable.

4.162 UKRI is the key delivery partner to achieve government's ambition of reaching 2.4% of GDP investment in research and development by 2027.

Industrial Strategy Challenge Fund

4.163 Through the Industrial Strategy Challenge Fund (ISCF), the government is investing in strategic innovation challenges that will create transformative opportunities for businesses and sectors across the UK. The ISCF brings together the UK's world-leading research base with highly innovative businesses to develop the technologies and industries of the future. In doing so, the ISCF aims to help solve the major industrial and societal challenges of our time.

4.164 So far £2.6 billion has been allocated to ISCF challenges over three waves of investment. These challenges have been developed to align with the four Grand Challenges set out in the Government's Industrial Strategy: Clean Growth, AI and Data, Ageing Society and The Future of Mobility. £1.7 billion has been allocated to ISCF challenges over the waves 1 and

2, supporting over 800 projects. Through waves 1 and 2, the ISCF is expected to unlock around £1bn of industry co-funding. Wave 2 is expected to meet more than a 1:1 match between industry and government. We expect to leverage £1.8 billion in private investment from wave 3 (from a total of £1.2billion public funding) and secure a 1:1.5 match across the portfolio of wave 3 challenges.

4.165 Examples of challenges from waves 1 and 2 include the Faraday Battery Challenge, Leading-Edge Healthcare, Prospering from the Energy Revolution, and Next Generation Services. Wave 3 challenges include Commercialising Quantum Technologies, Smart Sustainable Plastic Packaging, Future Flight and Industrial Decarbonisation.

Research and Innovation Talent

4.166 The UK is a global leader in research and innovation, and this reputation is maintained through work by UKRI, the National Academies, and other partners. To achieve the goals of the Industrial Strategy, including the raising of total R&D investment to 2.4% of GDP, the UK will need a strong research base capable of pioneering new innovations that can attract investment, and the opportunity for the UK to become world-leading in the key industries of the future.

- BEIS & DCMS announced in June 2018 that UKRI's £900million Future Leaders Fellowship Scheme will award at least 550 fellowships over the next three years

- Fellowship schemes from the national academies also received £350 million as part of the above announcement, enhancing the research talent pipeline and number of fellowships on offer for highly skilled researchers

- a total of £100 million has been allocated for additional doctoral training, through Centres for Doctoral Training (CDTs) focused on Artificial Intelligence (AI). This funding will provide training for around 1,000 additional PhD studentships in AI over the next nine years to support the delivery of the Grand Challenges in the Industrial Strategy. The first students were appointed in academic year 2019/20

- in 2019 UKRI partnered with the Office for AI and the Alan Turing Institute to launch a new fellowship scheme. £8 million was invested in year one and a further £38m will be invested in 2019-20 and beyond, totalling an investment of £46 million to bring the very best researchers in AI from around the world, to the UK

- in October 2019, we announced a £170 million boost through the BBSRC to fund 1,700 doctoral students in the Biosciences through Doctoral Training Partnerships (DTPs)

- in January 2020, government investment of £300 million over five years was announced to fund adventurous and imaginative mathematical sciences research by the very best global talent over the next five years - with ~£26 million per annum focussed on delivering PhD studentships and funding research fellowships

4.167 The Rutherford Fund, launched in July 2017, is a £118 million four-year programme that will initially operate between 2017 to 2021 to attract the brightest minds and highly-skilled researchers to the UK, focusing on the provision of fellowships from early to senior career level.

Since its launch in 2017, Rutherford has supported more than 300 researchers hosted at over 40 of our world class institutions located across the UK. This includes the Francis Crick and the Alan Turing Institutes, the National Academies, UKRI, and various UK museums and universities. This is providing an influx of global talent from more than 30 countries in a diverse range of fields at a variety of career stages.

Clean growth

4.168 The UK Government will maximise the advantages for UK industry from the global shift to clean growth through leading the world in the development, manufacture and use of low-carbon technologies, systems and services that cost less than high carbon alternatives.

- *Transforming construction* - to eliminate the productivity gap in construction and provide safer and more affordable places to live and learn that use less energy
- *Prospering from the energy revolution* –to develop smart energy systems that can improve efficiency by linking energy supply, storage and use
- *Transforming food production* – to increase agricultural productivity and meet the needs of a growing population by producing food in a more efficient and sustainable way

4.169 The government's 25 Year Environment Plan sets out our goals for improving our domestic natural environment within a generation and leaving it in a better state than we found it. It details how government will work with communities and businesses to do this, with the aim of boosting productivity by enhancing our natural capital – the air, water, soil and ecosystems that support all forms of life – since this is an essential basis for economic growth and productivity over the long term.

R&D and taxation

4.170 We are supporting more companies to carry out R&D through the UK's R&D Tax Credits. The UK's R&D tax relief schemes are an effective and internationally competitive element of the government's support for innovation. So far just over £4.3 billion has been claimed for 2017-18, of which £2.3 billion was claimed through the SME scheme and £2.1 billion by companies under the Research & Development Expenditure Credit (RDEC) scheme. This has supported a corresponding expenditure of £31.3 billion on R&D. There have so far been 48,635 R&D tax credit claims for 2017-18, of which 42,075 are in the SME R&D scheme. This number is expected to increase as more tax returns are received. Companies claim the relief in their tax returns, so there is a lag in data and it can take up to two years for complete data to be available.

4.171 In the Budget on 11 March 2020, the government committed to increase the tax credit rate for RDEC to 13%, further supporting businesses investing in R&D and helping to drive innovation in the economy. The government also announced it would consult on whether expenditure on data and cloud computing should qualify for R&D tax credits.

4.172 The government also introduced the Patent Box in April 2013, which applies an effective corporation tax rate of 10% to profits attributable to patents and equivalent forms of intellectual property. The intention of this relief is to encourage commercialisation and retention of IP within UK companies. In 2016-17, 1,170 companies claimed relief under the Patent Box with a total value of £1 billion. The numbers and total value of the relief claimed increased year on year since 2013-14 as the benefit of the Patent Box was phased in. Since July 2016 the deduction claimed by new entrants and for new IP has been linked to the substantive R&D expenditure of that company and this has been confirmed to be a non-harmful tax measure by the OECD as part of its BEPS programme of work.

4.173 The government encourages individuals to make investments in early stage unquoted trading companies, which might otherwise struggle to access the finance they need to grow and develop. The incentives, which include upfront income tax relief and capital gains tax reliefs, are offered through the Enterprise Investment Scheme (EIS), the Seed Enterprise Investment Scheme (SEIS) and Venture Capital Trusts (VCT).

4.174 The government has significantly expanded the support that innovative knowledge-intensive companies can receive through the Enterprise Investment Scheme (EIS) and Venture Capital Trusts (VCTs). From 6 April 2018 the annual investment limit for EIS investors was doubled from £1 million to £2 million, provided that any amount above £1million is invested in knowledge-intensive companies, and the maximum amount a knowledge-intensive company can raise under the EIS and/ or from a VCT was doubled from £5million to £10 million.

Public procurement and R&D

4.175 The Small Business Research Initiative (SBRI) is a cross-government process, managed by Innovate UK (the UK's innovation agency), that enables small businesses to bid for government contracts to develop new products and solutions for the public sector. Through SBRI, Departments and public bodies launch competitions challenging industry to develop new innovative solutions for the public sector. Business can typically win funding of up to £100,000 to test new ideas and up to £1 million to develop a prototype.

4.176 SBRI has two main aims:

- to stimulate innovation in the economy by supporting firms to develop and commercialise new technology-based products and solutions
- to provide government departments and their agencies with new, cost effective, technical and scientific solutions to meet their needs

4.177 . By January 2020 around £0.7 billion in SBRI contracts had been awarded around to businesses since it started in 2009. Over the same period around 100 public sector bodies have been involved in over 500 SBRI competitions.

GovTech Catalyst Fund

4.178 In 2018, government launched a new GovTech Catalyst Fund worth £20 million over three years (2018-2021) to support the uptake of digital technologies such as AI, blockchain, or Internet of Things in the public sector. The GovTech Catalyst Fund supports public sector bodies, including those in devolved administrations and at the local level, to run SBRI competitions which challenge the tech sector to develop digital solutions for the public sector that will bring better public services or reduce costs. Fifteen challenges have so far been chosen for support, including for areas such as monitoring the condition of social housing using sensors, accelerating the building of new housing using better geospatial intelligence, improving firefighter safety and operational response, and detecting and quickly identifying illicit goods at the border.

Catapults

4.179 The government has established a network of Catapult Centres to commercialise new and emerging technologies in areas where there are large global market opportunities and a critical mass of UK capability to take advantage. Through the Catapult network, we are bridging the gap between business, academia, research and government on late-stage research and development to transform "high potential" ideas into new products and services to generate economic growth.

4.180 During 2018, we announced an investment of more than £1.2billion over five years. This will allow the Catapult network to help thousands of businesses across the UK do cutting-edge R&D. Catapults also train hundreds of apprentices and doctoral students in technical skills in high demand from industry. This funding builds on the success of the Catapult centres and recognises the significant impact they have had in transforming the UK's innovation infrastructure. Catapults are a crucial part of helping us meet our ambition to spend 2.4% of our

GDP on research and development and make sure the UK is the world's most innovative economy.

4.181 As part of the government's commitment to increase funding in research and innovation we will be doing a short piece of work to examine how the UK's Catapult Centres can strengthen R&D capacity in local areas, improving productivity and contributing to greater prosperity across the UK. This review will be led by BEIS and UKRI.

Higher Education Innovation funding

4.182 The government is increasing funding that supports universities and businesses to work together to innovate and commercialise research. Key to this is the Higher Education Innovation Funding (HEIF) in England, which enables universities to engage with businesses and improve the commercial skills of their staff. HEIF has deepened universities' relationships with business. University patents, licence income and industrial collaboration are increasing and there is scope and demand from business to do more. The government has committed to increase HEIF from £160 milion per year in 2016-17 to reach a total of £250 million a year by 2020-21, as recommended in the Witty Review. The increased support is aligned with the needs of the Industrial Strategy. Building on HEIF mechanisms, the Connecting Capability Fund has invested £85 million over 2018-21 in projects supporting universities in England to collaborate together, to pool ideas, capability and resources, and share best practices in IP commercialisation and working with business. This additional funding results in consequential funding to the Devolved Administrations.

Knowledge Exchange Framework

4.183 Research England within UK Research and Innovation is developing a new Knowledge Exchange Framework, a consultation concluded in March 2019 on a proposed approach to KEF metrics, including clustering universities into groups with similar characteristics/capabilities in order to give fair comparison of performance. It will come into full effect during 2020 and will assess how well universities are doing at fostering knowledge sharing and research commercialisation. It will complement the Research Excellence Framework and the Teaching Excellence Framework (TEF) and is being augmented by development of a Knowledge Exchange Concordat which will outline key Knowledge Exchange principles for adoption by the Higher Education Institutions. The development of the Knowledge Exchange Framework is building on the work of the McMillan Review, and will capture the rich network of collaborations between university and businesses.

Science and Innovation Audits

4.184 Science and Innovation Audits (SIAs) were launched in November 2015 as a new way to explore and encourage links between research excellence innovation, and productivity. Government invited consortia of universities, research and innovation organisations, businesses and Local Enterprise Partnerships (LEPs) – and their equivalents in the Devolved Administrations - to undertake research. This process culminated over three waves in 25 Science and Innovation Audits. SIAs helped to build our understanding of where the strengths in both science and innovation are situated throughout the UK and identify opportunities for future growth.

Strength in Places Fund

4.185 Evidence shows research and innovation drives productivity and strategies work best where they support existing strengths and collaborations. Building on emerging evidence of the Science and Innovation Audits, the government's competitive £236 million Strength in Places Fund (SIPF) support areas across the UK to build on their science and innovation strengths. The fund is part of the National Productivity Investment Fund (NPIF) that contributes to the UK's target to reach 2.4% of GDP investment by 2027.

4.186 SIPF will fund collaborative proposals building on research and innovation capabilities which demonstrate a strong impact on local growth and productivity and enhance collaboration between local businesses, research organisations and leadership bodies from consortia across the UK. A key requirement of this fund is that bids are well aligned with broader local economic plans and build on the R&D strengths of their respective geographies.

4.187 The SIPF is being delivered through UK Research and Innovation as a competitive fund. The programme operates a two-stage assessment process, whereby successful consortia receive modest funding (c50K) to develop their proposals for full funding awards of between £10-£50m. In the first wave, all 23 successful bids for seed-corn funding submitted full stage bids. Winners of these bids will be announced in Spring/Summer 2020. Calls for Wave 2 seed-corn funding was launched in May 2019. The announcement of these successful expressions of interest is scheduled for Spring/Sumer 2020.

4.188 UK Research and Innovation will evaluate the early stage of the programme in 2021 to consider how it is working.

Future frameworks for international collaboration

4.189 Professor Sir Adrian Smith and Director and Chief Executive of the Alan Turing Institute was commissioned by BEIS and HMT to provide independent advice on future frameworks for international collaboration on research and innovation. Sir Adrian and Professor Reid's report on 'Changes and Choices' sets out their recommendations. It highlights the importance of stabilising and building on the UK's research and innovation capability, it presents opportunities for the future funding landscape of UK research and innovation globally. The government is carefully considering the recommendations including how this might inform future policy. This work is one part of an important package of complementary workstreams, to ensure the UK continues to succeed as a global science superpower.

International collaboration

4.190 We are committed to making the UK a global science superpower and a magnet for brilliant people and businesses from across the world. We recognise that science, research and innovation rely on strong international partnerships and the government remains committed to ensuring that world leading talent is attracted to and attained within the UK. The ambition of our global engagement is to involve the entire UK research and innovation community.

4.191 As announced in the Industrial Strategy, we have worked in partnership with UKRI and our National Academies to develop a new International Research and Innovation Strategy. This was launched in May 2019. The Strategy sets out our commitment to ensuring that the UK retains its position as a partner of choice for international research and innovation.

4.192 We fund substantial international research programmes. BEIS research and innovation Official Development Assistance (ODA) funds leverage the UK's pre-eminent research and innovation base to ensure that UK science takes a leading role in addressing global challenges faced by developing countries The BEIS Research and Innovation ODA budget from 2016/17 to 2020/21 is approximately £2.2 billion and is delivered through two key funds: the Global Challenges Research Fund (GCRF) and the Newton Fund.

4.193 In January 2019 we announced £200 million for 12 new interdisciplinary research hubs that will build new collaborations with researchers from around the world and ensure that the UK remains at the forefront of efforts to tackle global development challenges such preserving our oceans, averting flooding risk, ensuring gender equality, and protecting future cities.

4.194 UK Research and Innovation administer a new (non-ODA) fund – the Fund for International Collaboration. This complements our ODA programmes and further supports global research partnerships. Two waves of funding have been announced to date: £79 million in January 2019 and 60 million in August 2019. They include:

- a project bringing together international climate and health researchers to ensure we are globally prepared to manage the health risks posed by climate change
- a collaboration between UK and Indian scientists to tackle antimicrobial resistance in the environment, such as from pharmaceutical industrial sources
- a programme developed with the Smithsonian Institution in the USA to explore how digital technology can open up the collections of leading museums to a global audience
- investigation with the USA to examine the subpolar ocean currents in the North Atlantic and the impact on world climate
- a partnership with Australia will examine how people's urban environment can have an impact on health
- a joint project with the USA, Israel and China will examine the interaction between humans, livestock, crops, wild animals and plants that can lead to diseases spreading

4.195 We have a range of strong bilateral science and innovation partnerships. For example:

- the Japanese PM visited the UK in January 2019 and agreed a significant programme of collaborative science and technology worth £30m focussed on treatments for some of the most debilitating degenerative diseases such as diabetes, heart disease and arthritis
- during the Prime Minister's visit to Africa in August 2018, a significant new DfID-led programme was announced to extend Research Hubs in West and Southern Africa, to accelerate the growth of promising technologies and support start-ups to grow sustainably, including through early-stage investment, connecting them with private financing, and building connections with UK peers
- in May 2018, the UK signed new landmark UK-Israel science and innovation agreements, focussing on improvements around Ageing and AI. We will work with partners in Israel to develop new technologies and opportunities in these areas to ensure we take advantage of these major global changes
- the UK-India Tech Partnership announced by PMs Modi and May in April 2018 brings together UK's Industrial Strategy and India's initiatives, such as "Make in India", Digital India, Start-up India, and builds on 10 years of exponential growth in our research collaborations
- in 2017, we signed significant science and innovation agreements with the US, Canada and China
- in Jan 2020 BEIS and the US Department of Energy signed an Annex to the US agreement formalising the UK's £65 million investment in the US hosted Long Baseline Neutrino Facility – Deep Underground Neutrino Experiment. This collaboration represents a big step change in neutrino physics

Devolved administrations

Northern Ireland

4.196 Northern Ireland continues to see steady growth in the investment of companies in innovation and R&D. Despite the growth not being as fast as other UK regions, the commitment shown is encouraging. An additional 60+ companies are now engaging in innovation and R&D and a further 1,700+ employees are specifically employed in R&D roles. The NI Executive continues to support progress in relation to innovation, however it is recognised that much more needs to be done to deliver the ambition of the draft NI Programme for Government and draft Industrial Strategy. The 'New Decade, New Approach' deal strengthens the Executive's ambition to increase the number of cyber security professionals to 5,000 by 2030.

4.197 Critical to success will be a wider adoption of innovation across the manufacturing, construction and agri-food sectors, along with growth of the digital and emerging technologies sectors. In addition, more needs to be done for stakeholders to recognise the value of eco-systems and clusters to effect change in the greater adoption of innovation and R&D. There continue to be a range of measures in place to support this. A new Investors in the Innovation accreditation scheme is currently being rolled out and will afford real benefit to those companies which participate in it. At its core are the principles of collaboration and cultural change. The accreditation process will recognise and reward the level of company innovation activities, creating an internationally recognised achievement.

4.198 Public sector innovation continues to be a factor to the growth of innovation in NI. Utilising the Small Business Research Initiative (SBRI) and GovTech programmes are having a real impact on delivering innovative solutions to public policy issues and helping with a cultural change in the adoption of innovation in society. Some 20 projects have been funded across public service areas such as Education, Health, Infrastructure and Tourism.

4.199 Northern Ireland is benefitting from the creation of a Digital Catapult Regional Centre in Belfast. This Centre is focusing on supporting the growth and adoption of Immersive Technologies and Artificial Intelligence. With the focus on industrial applications of these emerging technologies, the regional centre is actively working with companies and innovators to identify opportunities and raise the commitment by industry to invest in innovative solutions to support productivity and competitiveness.

4.200 Materials Handling, Cyber Security, Creative Tech, Artificial Intelligence and Immersive Technologies are key sectors for innovation and R&D. Research is underway to assess the clustering potential and how Northern Ireland companies can capitalise more on collaborative initiatives, such as the national Grand Challenge initiative. The Department for the Economy signed a Memorandum of Understanding with Maryland State, USA which will open up opportunities for knowledge transfer and collaboration.

4.201 To move to a more open innovation system and increase productivity and growth, the Northern Ireland Executive has prioritised participation in collaborative R&D programmes such as Horizon 2020, and has set a target to draw down €145 million of Horizon 2020 funding. The most recent data, released in October 2019, show that Northern Ireland has secured €86.8 million Horizon 2020 funding and our success rate for applications is over 14%.

4.202 A recent example of the SBRI Northern Ireland initiative from Matrix NI and the Department for the Economy is using live data to match the needs of complex school transportation requirements to meet the challenge of making school transport safer and more effective.

Scotland

4.203 The Scottish Government has worked closely with Entrepreneurial Scotland and other partners in the public, private and third sectors to develop Scotland CAN DO. This sets out a collective vision to make Scotland a world-leading entrepreneurial and innovative nation where sustainable growth and innovation go hand in hand with wider benefits to all of society.

4.204 An example of Scotland CAN DO in action is the Scottish EDGE Fund. Led by a partnership interests from across different sectors, this delivers investments of up to £150,000 to early-stage businesses with growth potential. After thirteen rounds of awards, the latest of which were made in December 2019, more than £14 million has been awarded to over 360 businesses which have, in turn, generated an additional £151 million in turnover while raising £124 million extra investment and creating over 1,850 jobs.

4.205 The Scotland CAN DO approach, alongside the combined efforts of the entrepreneurial community, has helped Scotland develop the 5th most supportive business environment in the world, rising above other parts of the UK from 12th (2013) in the Global Entrepreneurial Development Index (GEDI). Since the launch of Scotland CAN DO in 2014, the proportion of people actively trying to start businesses has doubled. Our commitment to entrepreneurship has been reaffirmed in the Enterprise and Skills Review Strategic Board's Strategic Plan and the Economic Action Plan.

4.206 Business Gateway is an integral part of the Scottish Government's public business support offering. This is delivered through local authority partners and offers all businesses in Scotland, regardless of their stage of development, advice and services related to funding, planning, financial management, marketing, sales and growth.

4.207 More than 50,000 people a year receive support from Business Gateway to start, run or grow their businesses. In 2018-19, this helped more than 9,000 people to start their own businesses while over 30,000 attended at least one free Business Gateway event or workshop.

4.208 The Scottish Government is undertaking several actions to directly encourage more business innovation, including:

- a target to grow Business Enterprise R&D (BERD) expenditure to £1.75 billion by 2025 and committed an additional £45 million from FY2018/19 to FY2020/21 for business R&D grants to support this. In year one 75 R&D grants were awarded with project costs totalling £123 million
- working with our Enterprise Agencies to raise business awareness of benefits of innovation via social media and *Scotland is Now* activity
- supporting the CAN DO Innovation Summit, headline event of VentureFest Scotland - an annual festival of discovery and innovation. This was held on 20 November 2019 at the Glasgow Science Centre with keynote speakers from Lego and NASA to an audience of 500 attendees

4.209 Using public sector needs and spend to catalyse innovation, the government has introduced:

- the £9 million CAN DO Innovation Challenge Fund, which was launched in November 2017 and used private sector innovation to solve public sector challenges. To date, it has funded 16 organisations to run 18 challenges and over 100 SMEs have applied to the calls, with £1.36 million of contracts awarded
- CivTech, the world's first cross public sector tech accelerator, which has worked with 25 public service organisations, has launched 37 challenges. It has generated 120 contracts

within CivTech, 106 contracts beyond CivTech with a contract value of £8.5 million, and raised £4.9 million of investment

- Procurement Innovation Partnerships which were set up to offer public bodies a route to work with potential providers, to both develop new innovative solutions for the public sector and then deploy them commercially at scale without further competition

4.210 To support innovation across sectors and places, the government has:

- launched the £65 million National Manufacturing Institute for Scotland
- supported the development of the £56 million Medicines Manufacturing Innovation Centre to revolutionise the way medicines are manufactured, co located with National Manufacturing Institute for Scotland
- supported the £16 million Northern Innovation Hub to help SMEs in the Highland Council area improve their businesses through innovation focusing on Life Sciences, Tourism, Food and Drink and Creative Industries

4.211 To make best use of University research knowledge and talent to drive growth and equip Scotland's people with the tools and skills needed to innovate, the government has:

- made £500,000 available to support the Climate Emergency Collaboration Challenge. Launched in August 2019, this invited consortia of businesses, colleges and universities to devise possible solutions to contribute to our net-zero emissions target of 2045
- funded Knowledge Transfer Partnerships in Scotland to drive knowledge exchange between industry and academia; at October 2018 there were around 84 active partnerships in Scotland
- funded the Scottish Innovation Centre network. These are world-leading collaborations between businesses, universities, colleges, public sector and others, capitalising on Scotland's world-class research

Wales

4.212 The Sêr Cymru programme has two main strands of activity:

- securing truly world-class academics as Sêr Cymru Research chairs/'Stars', Rising stars and Research Fellows based within Wales
- establishing National Research Networks (NRNs) to bring together academic teams across institutions working in three broad 'grand challenge areas'

4.213 This £50 million, five-year programme, supported by the Higher Education Funding Council for Wales (HEFCW), is part of the Welsh Government's drive to increase research capacity within the HEI sector by building the essential foundations of a vibrant and socially responsive economy. Even though the Sêr Cymru was put forward in Science for Wales back in 2012, in today's terms, it delivers many of the objectives as outlined in the Welsh Government's National Strategy, Prosperity for All and the Economic Action Plan. The programme is designed to help improve both the quality and quantity of research activity in Wales, so that it will become more competitive, while retaining a focus on Wales' existing strengths in academia, business and industry. It will also improve skills, employment, prosperity and health for future generations.

4.214 The original Sêr Cymru programme is now nearing its planned end date. Four world-class academics now hold Sêr Cymru Research Chairs (2 in Swansea University and 2 in Cardiff University) and have brought together many significant industrial and international research collaborations. All three National Research Networks (NRNs) - Life Sciences and Health, Advanced Engineering & Materials, and Low Carbon, Energy & Environment - are more than halfway through the programme and almost all of the funding has been allocated to research programmes.

4.215 Since inception (late 2013), collectively, the Sêr Cymru four Research Chairs and three National Research Networks have brought in just over £95 million (at end September 2017), of competitive research funding into Wales. The programme has also supported the appointments of up to 161 Post-doctoral researchers and 159 PhD/EngD students from across the globe to Wales to study. Their research outputs have demonstrated Welsh excellence on the international scientific stage.

4.216 Sêr Cymru 2, which was launched in 2015, is continuing to develop Wales's research capacity further in order to increase Wales' share of competitively won research income. Sêr Cymru 2 is funded through the Horizon 2020 Marie Sklodowska-Curie COFUND, the European Regional Development Funds through the Welsh Government, the Welsh Government, HEFCW and the Welsh HEI Sector. The cost of the overall programme is just under £56 million.

4.217 The Programme is aimed at recruiting 'Rising Stars' and appointing more Research Fellows. It also includes a strand aimed at re-capturing talent, for researchers who have taken a break from the research environment. Ser Cymru 2 also supports Research Chairs where a demand can be demonstrated.

4.218 To date Sêr Cymru 2 has just over 100 awards in place across a broad range of research areas in advanced materials and manufacturing, low carbon and environment, life sciences and health and ICT and the digital economy.

4.219 A number of prestigious awards have been made to Research Chairs across Wales in the fields of sustainable advanced materials, low carbon energy, drug discovery, systems medicine and earth observation.

4.220 The £63m European Regional Development Fund (ERDF)-funded SMARTCymru operation was approved last year and is now operational. As Wales' R&D and innovation grant support scheme for business, SMARTCymru complements the SMART scheme run by Innovate UK. SMARTCymru is primarily aimed at SMEs already operating in Wales. A range of Innovation Vouchers and R&D funding support is offered to help businesses carry out research and development work that will lead to technologically innovative products or processes.

4.221 SMARTExpertise has replaced Academia for Business (A4B) as Wales' programme for academic-business collaboration. The 6-year operation funds research organisations, including universities, to undertake industry-led collaborative R&D projects. Over the life of the programme, it will provide support for 120 projects having a total value of £51 million involving 320 collaborative partners, providing £21 million of private sector investment. This will deliver 132 new to market or company products, processes or services. An important aim of the programme is for projects to compete for subsequent funding from other sources such as Innovate UK or Horizon 2020.

4.222 The Innovation Advisory Council for Wales has undertaken a full programme of work, assisting the Welsh Government with the delivery of Innovation Wales strategy. Notable early achievements have been assisting with building the business case for a Compound Semiconductors Catapult Centre in Wales, supporting Wales' participation in international groupings such as the Regional Entrepreneurship Acceleration Program with the Massachusetts Institute of Technology, and the Vanguard Initiative and examining the case for the formation of a National Innovation Body for Wales.

4.223 The Welsh Government's Small Business Research Initiative (SBRI) Catalyst Fund continues in Wales, promoting and supporting the use of the SBRI mechanism by problem owners in the public sector. Working in partnership with Innovate UK and in some instances with other UK Government departments, Wales now has 11 challenges in progress or completed with a further call for up to six new challenges being developed for 2016 to 2018. Public sector bodies participating include South Wales Police, University Health Boards, local government and Natural Resources Wales.

4.224 SMARTInnovation has replaced the previous Business Innovation service. This is a £21 million ERDF-funded, 8-year programme, aimed at increasing innovation awareness and capability of Welsh businesses and assist them to access financial support to grow their investment in R&D and Innovation. The operation provides impartial innovation advice and diagnostics, advice on intellectual property, non-financial support for the acquisition and implementation of new technologies and support for commercialisation and licensing. In addition to non-financial support the programme helps companies to access a wide range of financial support including SMARTCymru, SMARTExpertise, Innovate UK and Horizon 2020.

4.225 The Welsh Government's Small Business Research Initiative (SBRI) Innovation Accelerator has been successful in promoting and supporting the use of the SBRI mechanism by challenge owners across the Welsh public sector. Working collaboratively with Innovate UK, UK Government departments and other devolved administrations, 14 challenges have been launched in Wales to date. Along with Innovate UK, projects have involved Welsh Government departments (Transport, Health, Environment, Food, Education), Natural Resources Wales, Abertawe Bro Morgannwg and Betsi Cadwaladr Health Boards, Unitary Authorities (Cardiff and Rhondda Cynon Taf) and South Wales and Gwent Police.

4.226 Competitions have generated 343 applications and 89 contracts have been awarded between 2014 and 2017, valued at over £6.5 million.

Climate change and energy

> **June 2010 European Council conclusions**
>
> Reducing greenhouse gas emissions by 20% compared to 1990 levels; increasing the share of renewables in final energy consumption to 20%; and moving towards a 20% increase in energy efficiency.

Relevant Treaty base: Article 121 and 191 of the Treaty on the Functioning of the EU, Integrated Guideline 5.

Government objective

4.227 In line with the EU Climate and Energy Package adopted in June 2009, the UK's Effort Sharing Decision (ESD) target is a reduction of 16% compared to 2005 Green House Gas (GHG) emissions levels by 2020. Projections submitted under the EU Monitoring Mechanism in 2017 show that the UK is on track to meet this 2020 target. To date, formal compliance reporting has taken place for the first five years of the ESD (2013-17). The UK has reported ESD emissions more than 112 MtCO2e below the annual targets for this period.

4.228 The EU Renewable Energy Directive (RED) set a target for the UK to increase the share of final energy consumption from renewable sources across heat, electricity and transport to 15% by 2020. As previously reported, the UK has already met its first three interim targets, and averaged over 2017 and 2018, the UK achieved 10.5% against our interim target of 10.2%. In 2018, 11% of total energy consumption came from renewable sources, up from 9.9% in 2017.

4.229 The 2012 Energy Efficiency Directive (EED) introduced a requirement on Member States to establish a non-binding national energy efficiency target by 30 April 2013. In April 2013, the UK notified the European Commission of its national target. The target was set at the level of 129.2 million tonnes of oil equivalent for final energy consumption, representing an 18% reduction relative to the 2007 business-as-usual projection (equivalent to a 20% reduction in primary energy consumption). In the UK's 2019 annual Energy Efficiency Directive report, primary energy consumption in 2017 fell by 1.2% since 2016 and final energy consumption fell by 0.7%. Compared with 2007, consumption was 16.0% and 8.7% lower respectively.

4.230 Energy and environmental policies rest within a complex landscape of devolved and reserved powers, and the devolved responsibilities differ in each of the UK's devolved administrations.

Policy context

4.231 In December 2015, an historic deal was struck at the United Nations Climate Change Conference in Paris, following which 195 countries committed to adopt a global climate change Agreement. The Paris Agreement on climate change entered into force on 4 November 2016 and was ratified by the UK on 18 November 2016.

4.233 The Nationally Determined Contribution of the EU and the Member States is an at least 40% domestic reduction in greenhouse gas emissions by 2030 compared to 1990 levels. This contribution will be fulfilled jointly by the EU and the Member States in accordance with EU legislation to be adopted in respect of both the emissions trading sector and the non-traded sector. The UK will increase its own Nationally Determined Contribution in due course.The Climate Change Act 2008 was the first of its kind in the world and made the UK the first country to introduce a legally binding, long-term emissions reduction target. The Act set a legally binding target to reduce greenhouse gas emissions by at least 80% by 2050 relative to 1990 levels. In June 2019, the government passed legislation to increase that target to a reduction of at least 100% (net zero).

4.234 It also introduced our innovative framework of carbon budgets to ensure continued progress towards that target, capping emissions in successive five-year blocks. The carbon budgets currently set in legislation are amongst the most stringent in the world, requiring the equivalent of a 57% cut in emissions by 2030 from a 1990 baseline.

4.235 To oversee progress, the Act established the Committee on Climate Change (CCC) – an independent, statutory body to provide expert advice to government on climate change mitigation and adaptation. Through this strong legal framework and ambitious policy action, we have shown that cutting emissions and growing the economy go hand-in-hand – reducing our emissions by over 40% since 1990 while growing the economy by three quarters.

4.236 The Clean Growth Strategy (published October 2017) sets out an ambitious blueprint for accelerating clean growth across the UK through to 2032, building on the great strides we have made in decarbonising the power sector. The Strategy contains 50 key policies and proposals to drive progress across all areas of our economy and society – including housing, business, transport, the natural environment and green finance. It focuses on areas where we get clear joint benefits: cleaner air, lower energy bills, industrial opportunity, high value green jobs, an enhanced natural environment, and improved quality of life. We have continued to bring forward new policy and deliver on the Strategy. Our response to the CCC's annual progress report – Leading on Clean Growth (Oct 2019) – sets out the progress we have made and the further action we are taking across all sectors of the economy to bring down emissions, meet our carbon budgets and deliver net zero.

Renewable energy

4.237 The Electricity Market Reform (EMR), implemented under the Energy Act 2013, set out a framework for encouraging investment in low carbon electricity generation. Alongside investment, the EMR also set out an Electricity Demand Reduction pilot and ensured security of supply through the Capacity Market mechanism.

4.238 Existing support for renewable energy includes:

- **Contracts for Difference (CfDs):** Introduced in GB in 2014, the CfD scheme is the UK Government's main mechanism for supporting new low carbon electricity generation projects. The scheme has been a success, delivering substantial new investment and helping deliver significant reductions in the cost of some renewable technologies. Projects currently supported by the CfD scheme are expected to provide around 16GW of new renewable electricity capacity by 2025 from a range of technologies. The next CfD allocation round is planned to open in 2021, and the UK Government plans to hold further auctions around every two years after that

- **The Renewables Obligation (RO):** Introduced to England, Wales and Scotland in 2002, and to Northern Ireland in 2005, the scheme was previously the main financial mechanism to incentivise the deployment of renewable electricity generation in the UK. It closed to new applications on 31 March 2017, but limited grace periods extended the deadline for certain projects up to 31 March 2019. Existing projects receive support for up to 20 or 25 years, depending on when they accredited. The scheme will finally close on 31 March 2037. By the end of March 2019, 26,525 stations had been accredited across the UK, with a renewable energy capacity of 35.2GW. In 2018/19, 79.1TWh of renewable electricity was generated, giving a scheme value of £5.9 billion. The RO has

now been succeeded, for new projects, by the Contracts for Difference Scheme in GB.
Feed-in Tariffs (FITs) scheme: Introduced to England, Scotland and Wales in April 2010, this scheme pays energy users who invest in small-scale, low-carbon electricity generation systems for the electricity they generate and use, and for unused electricity they export back to the grid. Since its introduction, the FIT scheme has supported over 860,000 installations, or 6GW of capacity. 99% of installations are solar, which amounts to 80% of overall capacity

Following public consultation, the scheme closed to new applicants after 31 March 2019, subject to some time-limited extensions and a grace period.

- **Market access following the closure of the FIT scheme:** In July 2019, the government passed legislation introducing the new Smart Export Guarantee, which requires most electricity supplies to offer a tariff to buy electricity exported by small low-carbon generators – typically households that have installed solar panels. This ensures that these generators, who may otherwise struggle to find a way to sell electricity because they are too small to access the market directly or to be of interest to most suppliers, can have a guaranteed access to the market and a range of options for their exported electricity. The SEG came into force on 1 January 2020, and small scale low-carbon generators now have several tariffs to choose from. The government will continue to monitor the types of export tariffs being offered to small generators to assess the development of the small-scale low-carbon export market

- **Renewable Heat Incentive (RHI):** Introduced in 2011, the Non-Domestic RHI provides financial incentives to increase the uptake of renewable heat by businesses, the public sector and non-profit organisations. Eligible installations receive quarterly payments for 20 years based on the amount of heat generated. The Domestic RHI scheme, introduced in 2014, is a UK Government financial incentive to promote the use of renewable heat in domestic properties. Eligible installations receive quarterly payments for 7 years for the amount of renewable heat it is estimated their system produces. Through the RHI, the UK Government has committed to spend £4.5 billion between 2016 and 2021 to support innovative low carbon heat technologies in homes and businesses, such as heat pumps, biomass boilers and solar water heaters.

- **Renewable Transport Fuel Obligation (RTFO):** Introduced in 2008 under the Energy Act, the RTFO scheme is the main mechanism to ensure the deployment of sustainable renewable fuels in transport. The RTFO requires fuel suppliers to ensure that, as a proportion of their overall fuel supply, renewable fuel is supplied into the UK market. Suppliers can choose to meet their obligation by supplying fuel that meets the relevant criteria, buying RTF certificates from others who have supplied renewable fuel that meets the criteria, or paying a 'buy-out' in respect of each litre of shortfall to meet their obligation. Under the RTFO, average greenhouse savings of biofuels supplied have increased from 46% in 2008/09 to 78% in 2017/18 (excluding emissions from indirect land use change).
  The RTFO has developed over time, introducing mandatory sustainability criteria to implement the Renewable Energy Directive and more recently to introduce restrictions on the use of food crops to address concerns around indirect land use change. The latest changes were introduced in April 2018. These include: setting a target trajectory for low carbon fuels to 2032 (rising from ~3% of transport energy in 2017 to ~7% by 2032); establishing a sub-target for advanced fuels from wastes; extending eligibility to low carbon aviation fuels; and limiting the contribution of biofuels produced from crops in meeting the obligation from a maximum of 4% in 2020, declining to a maximum of 2% in 2032.

The government's Future Fuels for Flight and Freight Competition (the F4C) is also making up to £20m of capital funding available to projects that will produce low carbon waste-based fuels to be used in aeroplanes and lorries.

- **The Motor Fuel (Road Vehicle and Mobile Machinery) Greenhouse Gas Emissions Reporting Regulations, or "the Greenhouse Gas Reporting Regulations":** The GHG Reporting Regulations are a key measure for reducing GHG emissions from the fuel supplied for use in transport, and require that suppliers of fuels for use in road transport and non-road mobile machinery achieve at least a 6% reduction in life cycle GHG emissions from the transport fuel that they supply in 2020, relative to the EU average life cycle GHG emissions from fossil fuels in 2010. Renewable aviation fuel, low carbon fossil fuels, upstream emission reductions (UERs) and electricity supplied to vehicles may also contribute to a suppliers' GHG reduction targets. GHG credits will be awarded to each kg of CO2e saved, for fuels that have a GHG intensity below the GHG target level for the relevant year.

  Further progress has been made in the area of renewable energy deployment. In 2017, renewable electricity accounted for more than a quarter (27.9%) of the UK's electricity generation. The UK already has a world-leading offshore wind sector and is well placed to benefit from further investment in renewables innovation to accelerate cost reduction.

Energy efficiency

4.239 The UK Government has put in place schemes designed to improve the energy efficiency of homes, businesses and the public sector. For homes, this includes:

- **The Energy Company Obligation (ECO)**: The ECO started in January 2013. It placed an obligation on energy suppliers to deliver carbon and notional bill savings by promoting and installing energy efficiency measures in residential properties. Energy suppliers are obligated where they have more than 250,000 domestic customer accounts and supply more than certain specified amounts of electricity or gas. This threshold has decreased to 150,000 customer accounts from 1 April 2020. There have been two phases of ECO completed so far – Jan 13 to Mar 15 ('ECO1'), and April 2015 to September 2018 ('ECO2'). The latest fuel poverty focussed scheme, ECO3, started on 3 December 2018 and will run until March 2022. The target for ECO3 is set in notional bill savings only.
  Reviewing Energy Performance Certificates (EPCs): In the Clean Growth Strategy, the government committed to a Call for Evidence on EPCs seeking views on introducing additional points when EPCs might be required and ways in which EPCs could be further improved in light of new sources of data and capabilities. On the basis of responses to the Call for Evidence we will shortly publish an action plan for EPCs. Since the Call for Evidence closed we have launched an innovation competition funding the development of smart meter-derived energy efficiency ratings, made it easier for innovative products to be recognised on the EPC, and committed to regularly publishing bulk EPC data for use in research and innovation.

- **Domestic Private Rented Sector Energy Efficiency Regulations:** Since 1 April 2018 there has been a requirement for any properties rented out in the private rented sector in England and Wales to have a minimum energy performance rating of E on an Energy Performance Certificate (EPC). This requirement is subject to a limited number of temporary exemptions. The regulations have applied to new lets and renewals of tenancies since 1 April 2018 and subsequently applied to all remaining tenancies (even where there has been no recent change in tenant or tenancy) from 1 April 2020 (1 April 2023 for non-domestic properties). Since April 2019 domestic landlords have been required to spend up to £3,500 to improve any EPC F or G properties they let in England or Wales to EPC E. The UK has committed to consult on establishing a trajectory_requiring as many privately rented homes as possible to be improved to EPC C by 2030 where practical, cost effective and affordable.

- Building a market for energy efficiency: Alongside the 2017 Clean Growth Strategy the Government published a Call for Evidence (CfE) on building the market for energy efficiency. A summary of responses was published in July 2019, and we are now using the evidence provided in these responses as we consider the development of future policy to encourage home energy efficiency. This is likely to include a range of measures to shape the market for the future in line with our aspiration that as many homes as possible will be upgraded to an Energy Performance Certificate (EPC) Band C by 2035, where practical, cost-effective and affordable. A key output following the CfE is the funding of six local energy efficiency supply chain demonstration projects. These pilots were designed to test different approaches for increasing the rates of energy efficiency improvements in non-fuel poor homes, alongside renovation work, by providing support for local supply chain integration and project coordination. The supply chain pilots entered their third year in April 2020, with the learnings informing our strategic thinking on the support and growth of the wider energy efficiency supply chain.

- Smart Metering Implementation Programme: Replacing traditional gas and electricity meters as part of a national energy infrastructure upgrade that will make our energy system cheaper, cleaner and more efficient, helping to deliver net zero carbon emissions by 2050.

- Boiler Plus: The policy objectives are to deliver additional energy and carbon savings from the domestic heating sector in England by lowering overall gas demand from domestic properties, thereby reducing fuel bills for these properties and contributing towards meeting the UK's legally binding carbon budgets. It aims to do this by increasing the deployment of devices which increase the efficiency of domestic heating systems, through controls and measures to make gas boilers heat homes more efficiently.

- Domestic Renewable Heat Incentive (RHI): The RHI schemes are summarised in the 'Renewable energy' section above. Applicants to the domestic RHI are required to meet minimum energy efficiency standards before accreditation. These include loft and cavity wall installation in all circumstances in which this is possible.

- Simple Energy Advice Service (SEA): The SEA service was set up in 2018 to provide impartial and tailored advice on how people can make their homes greener and cheaper to run. The service consists of an easy-to-use website, supported by a call centre which members of the public may contact for assistance. SEA was created in response to the Government-commissioned Each Home Counts Review, which emphasised the importance of consumers receiving trusted, impartial advice on energy efficiency. SEA's 'core' offer is an assessment of users' behavioural traits and of the fabric of their homes (using EPC data), resulting in tailored energy saving advice. Where relevant, users are directed towards financial support and qualified installers. There is further information, for example on smart meters, and specific advice for tenants and landlords. We are continuing to develop the service to broaden and further improve its functionality.

4.240 In May 2018, the UK Government launched the Buildings Mission, the first mission under the Clean Growth Grand Challenge, which aims to at least halve the energy use of new buildings by 2030, reduce the cost of retrofitting efficiency measures in existing buildings, and to ensure homes and businesses are heated by clean energy sources. The Mission was backed by £170 million of public money through the Transforming Construction Industrial Strategy Challenge

Fund. We expect this will be matched by £250 million of private sector investment, meaning over £400 million will be invested in new construction products, technologies and techniques.

4.241 To explore how economies of scale and product and process innovation can help to reduce energy efficiency retrofit costs, the government launched a £10 million Whole House Retrofit (WHR) cost reduction trajectory innovation competition in summer 2019 as a key early step in accelerating a reduction in domestic retrofit costs. A further £5 million innovation competition was launched alongside the WHR competition to explore how green finance could work to support and incentivise homeowners to make energy efficiency improvements.

4.242 In March 2019, the UK Government added to the Buildings Mission by committing to introduce a Future Homes Standard by 2025, for new build homes to be future proofed with low carbon heating and world leading levels of energy efficiency. Introducing the Future Homes Standard by 2025 will ensure that the homes this country needs will be fit for the future, better for the environment, and affordable for consumers to heat.

4.243 The Ministry of Housing, Communities and Local Government recently consulted on a meaningful and achievable increase to the energy efficiency standards for new homes to be introduced through the Building Regulations in 2020, as a steppingstone to this commitment. This consultation also set out some of the proposed details of what the Future Homes Standard will look like. A consultation will follow on standards for non-domestic buildings and existing buildings.

4.244 The UK's Clean Growth Strategy set out the government's ambition to improve business energy efficiency by at least 20% by 2030. Since then we have published a number of consultations and calls for evidence to progress policy in this area, as well as continuing to develop existing policies and work across Government to drive reductions in emissions. Recent consultations have included:

- consulting on raising minimum standards of energy efficiency for rented commercial buildings
- publishing a call for evidence on a new energy efficiency scheme for small and medium sized enterprises

4.245 Facilitating Energy Efficiency in the Electricity System Call Evidence opened 22 July 2019 following the Energy Demand Reduction (EDR) pilot evaluation. It considers how to reduce barriers to the development of the market for electricity demand reduction measures. Building on the responses received, we will engage further with stakeholders to explore options so that electricity demand reduction can become a reliable alternative to increased generation and network reinforcement.

4.246 In May 2018, the UK Government launched the Buildings Mission, the first mission under the Clean Growth Grand Challenge, which aims to at least halve the energy use of new buildings by 2030, reduce the cost of retrofitting efficiency measures in existing buildings, and to ensure homes and businesses are heated by clean energy sources. The Mission was backed by £170 million of public money through the Transforming Construction Industrial Strategy Challenge Fund. We expect this will be matched by £250 million of private sector investment, meaning over £400 million will be invested in new construction products, technologies and techniques.

4.247 To drive further emission reductions in the building sector, the Ministry of Housing, Communities and Local Government also plans to consult on Part L of the building regulations with the aim of improving the energy efficiency of new and existing commercial buildings.

4.248 We also plan to consult this year on introducing mandatory in use energy ratings for private non-domestic buildings.

4.249 Other policies to help businesses reduce their energy use include:

- **The Energy Savings Opportunity Scheme** requires all large organisations to undertake an audit at least every 4 years of their energy use in buildings, processes and transport and identify energy savings opportunities. The deadline for the second compliance period was on 5 December 2019 and the Environment Agency has published a list on gov.uk[3] of the organisations who have notified compliance. An evaluation and post-implementation review of the scheme was published in February 2020, which set out how ESOS had delivered against the energy /carbon estimates made in 2014.

- **The Climate Change Agreements Scheme** has encouraged improvements in energy efficiency across 53 industrial sectors, in return for significant discounts from the Climate Change Levy. An evaluation of the extent to which the current scheme, which began in 2013, has met its twin objectives of ensuring competitiveness while delivering energy/carbon savings. Following the evaluation, the Government announced at Budget 2020 that it has decided to reopen and extend the CCA scheme by two years. The terms of the extended scheme will be set out in a consultation to be launched in due course.

- **The Climate Change Levy (CCL)** introduced in 2001, is a levy on the supply of energy to business and public-sector consumers intended to change their behaviour to reduce energy consumption. Building on the Budget 2016 announcement to make gas and electricity CCL rates equal by 2025 and that the CRC Energy Efficiency Scheme would be closing, CCL main rates (and reduced rates for Climate Change Agreements participants) have changed from 1 April 2020 as announced at Budget 2018, with the rate paid for electricity decreasing by 4.3% while the rate on gas increases by 19.8%. The government announced at Budget 2020 that it will be raising the rate on gas to £0.00568/kWh in 2022-23 and to £0.00672/kWh in 2023-24 whilst freezing the rates on electricity. To ensure the tax system treats fuels that are used off the gas grid more equitably, the government will freeze LPG at 2019-20 levels until April 2024.

- **Combined Heat and Power Quality Assurance Programme (CHPQA)** is an annual assessment process that ensures that all CHP plants that benefit from government support through a variety of renewable energy and energy taxation policies meet a minimum level of energy efficiency. Those that meet the EU’s requirement for 10% primary energy savings are referred to as ‘good quality’ CHP. In order to receive CHP support for electrical output, we require that systems are certified as ‘good quality CHP’ in the CHPQA. The CHPQA is a voluntary programme and CHP plants do not have to apply unless they wish to claim government support.

- **The Electricity Demand Reduction (EDR)** pilot tested the viability of the Capacity Market and learning lessons for Government and other stakeholders on EDR more widely, by providing funding to participants for the actual reductions in electricity use they made over the winter peak period. An evaluation of the pilot was published in July 2019, which concluded that energy efficiency projects were not yet ready to enter the GB Capacity Market as currently designed. As set out above [4.247] subsequent Call for Evidence closed in September 2019, seeking views on how to reduce barriers to the development of the market for EDR measures, and a Government Response will be published in due course.

- **The Industrial Heat Recovery Support Programme** was opened by the UK Government in October 2018 and is open for applications until July 2020, the IHRS provides funding towards project costs of feasibility studies, preliminary engineering studies and capital deployment until March 2022. The programme aims to increase the deployment of heat recovery technologies in England and Wales and offers a total of £18 million in grant funding. The Programme supports projects that recover and reuse heat generated for industrial processes, that otherwise would be wasted. This waste heat can be reused in different ways; within the same industrial facility, by another end-user (e.g. through a heat network), or by converting the waste heat to power. This technology will allow businesses to reduce waste heat, save money on their energy bills and reduce carbon emissions. By the end of March 2020, the IHRS programme has offered some £7million to around 30 projects.
- **An Industrial Energy Transformation Fund (IETF)** announced in the Autumn Budget in 2018. The IETF will support businesses with high energy use, such as energy intensive industries, to transition to a low carbon future. It will help companies cut their energy bills and carbon emissions through investing in energy efficiency and low-carbon technologies. The IETF has a UK-wide budget of £315 million over five years to 2024.
- A new **Streamlined Energy and Carbon Reporting Framework (SECR)** came into force in April 2019 to coincide with the wind down of the CRC Energy Efficiency Scheme (as no CRC allowances were required for allowances after 31 March 2019). SECR aims to reduce the administrative burdens of the current overlapping suite of reporting requirements while increasing corporate transparency, further incentivising energy efficiency and reducing carbon emissions. It will provide an estimated 11,900 large organisations with consistency in emissions reporting that aligns with the existing requirements for quoted companies. As part of the reporting requirements, businesses will need to disclose any energy efficiency action taken in a financial year. Given companies have up to 6 months (and in some cases up to 9 months) after their financial year end to file accounts we expect the first reports to be filed in the second half of 2020.
- The **BASEE (Boosting Access for SMEs to Energy Efficiency) Competition**. The aim of BASEE is to accelerate the growth of the energy services market for SMEs (Small and medium-sized enterprises) by driving down transaction costs and promoting third party investment in small-scale energy efficiency projects. The competition has made available £6m of funding for innovative, scalable business models or solutions that facilitate investment for small energy efficiency retrofit/refurbishment projects for SMEs in the UK. The competition launched on 13 March 2019 and will run until end of March 2021.
- The **In-use energy performance ratings** is part of government's response to the Committee on Climate Change 2019 report, the government committed to consult on introducing mandatory in-use energy performance ratings for non-domestic buildings in the private sector. This will be key to helping businesses to understand and improve the actual energy performance of their buildings.
- The **Small Business Energy Efficiency Scheme.** Work is being carried out on the development of a new Small Business Energy Efficiency Scheme and the UK Government published a Call for evidence in March 2019 to explore options. A summary of responses will be published in due course. The aim of the scheme is to realise the untapped cost-effective energy saving potential in the SME sector and contribute towards the Clean

Growth Strategy ambition of supporting businesses to improve their energy efficiency by at least 20% by 2030.

- We have also commissioned the British Standards Institute (BSI) to produce a new **Publicly Available Standard (PAS)** for the installation of energy efficiency measures in non-domestic buildings. These standards will promote trust and confidence in the energy efficiency market, and consideration will also be given on how to incentivise accreditation to these standards through the existing and future policy framework.

Devolved administrations

Northern Ireland

4.250 Northern Ireland's response to climate change is coordinated through the Cross Departmental Working Group on Climate Change. It was established in 2011 and in 2019 was renamed the Future Generations Group. The Group contains representatives from all government departments and is chaired by the Department of Agriculture Environment and Rural Affairs (DAERA) Minister. Its terms of reference include 'to review cross-departmental action on climate change on an annual basis, to ensure we remain on target to deliver the greenhouse gas emissions reduction target set out in the NI Executive Programme for Government'.

4.251 The Programme for Government (PfG) is the highest-level strategic document of the Executive – setting out the priorities that it will pursue. It contains a framework of outcomes designed to target those things that will make real improvements to people's quality of life. Outcome 2 of the PfG - "We live and work sustainably protecting the environment" contains an indicator (indicator 29) on Greenhouse Gas emissions.

4.252 The latest emission figures available for Northern Ireland, set out in the Greenhouse Gas Inventories for England, Scotland, Wales and Northern Ireland: 1990 – 2017, estimates Northern Ireland emissions at 20 million tonnes of carbon dioxide equivalent (Mt CO2e). This includes 27% from agriculture, 23% from transport, 17% from energy supply and 13% from the residential sector. Across all sectors, 2017 emissions levels show a longer-term decrease of 18% since the base year.

4.253 The 2010 Northern Ireland Strategic Energy Framework set the direction for energy policy to 2020. The Department for the Economy is currently progressing the development of a new longer-term energy strategy to cover the period 2020 to 2050 within the context of net-zero emissions by 2050. This will be subject to ministerial approval.

4.254 In 2010 the Northern Ireland Executive set a target, through its Strategic Energy Framework, that Northern Ireland would seek to achieve 40% of its electricity consumption from renewable sources by 2020.

4.255 The target was exceeded at the end of 2018 and the most recent statistics confirm that for the period 1 October 2018 to 30 September 2019, 44.9% of electricity consumed in Northern Ireland was generated from renewable sources.

4.256 This has largely been achieved through the success of the Northern Ireland Renewables Obligation which has facilitated the deployment of almost 24,000 renewable electricity generating stations across Northern Ireland since 2005, using a wide range of technologies including onshore wind, solar PV, biomass, biogas and hydro.

4.257 Another major contributory factor has been the delivery of the DS3 (Delivering a Secure, Sustainable Electricity System) Programme under which the Transmission System Operator has introduced measures to improve the flexibility of the electricity system, so that it operates safely, securely and in a reliable manner, while minimising curtailment, taking account of an increasing penetration of renewables generation. This has so far enabled levels of variable renewables generation possible on the system at any given time to increase from 50% to 65%, with the aim of increasing this to 75% over the coming years.

4.258 New inter-town pipelines to extend the natural gas network to eight towns in the West of Northern Ireland have been completed. Strabane was the first area to be connected to gas as part of the project, and the remaining towns had gas available by December 2019. New inter-town gas pipelines have also been completed to connect some 13 towns and villages in East Down to natural gas, with gas consumers connected in a number of locations in both projects.

4.259 Work continues by developers to progress energy projects which have benefitted from having EU Projects of Common Interest status such as gas storage and additional electricity interconnection with the Republic of Ireland. Promoters of the gas storage project have been successful in accessing EU Connecting Europe Facility (CEF) funding for important pre-construction studies, and are working towards commencing the construction stage of the project.

4.260 A non-domestic Renewable Heat Incentive (RHI) was introduced in Northern Ireland in November 2012. It offered a financial incentive to commercial, industrial, public, not-for-profit and community generators of renewable heat for a 20-year period. The scheme was suspended in February 2016, with over 2,000 renewable heat installations incentivised under the scheme.

4.261 A domestic RHI scheme was subsequently introduced in December 2014. The domestic scheme offered a financial incentive for the use of four different renewable heating technologies in domestic properties. Participants received incentivisation through an upfront payment followed by seven years of annual payments. Over 2,500 domestic properties availed of the domestic RHI scheme before its suspension in February 2016.

Box 4.C: Northern Ireland stakeholder focus: GHG Emissions

DAERA takes the lead for Outcome 2 “We live and work sustainably – protecting the environment” and its indicator on “Greenhouse Gas Emissions”.

Actions to reduce GHG emissions requires a collaborative approach and in NI this has been achieved through the Future Generations Group on Climate Change. Extensive engagement with external stakeholders and key delivery partners was carried out by all departments represented when developing actions and measures to reduce greenhouse gas emissions contained within the Outcome 2 delivery plan.

Scotland

4.262 Action to mitigate climate change is a key component of the Scottish Government’s aim to create a growing, sustainable and inclusive economy.

4.263 Scotland is committed to achieving net zero emissions of all greenhouse gases by 2045, for the benefit of our environment, our people, and our prosperity. Significant progress has already been made and Scotland’s emissions have almost halved since 1990.

4.264 The Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 amends the Climate Change (Scotland) Act 2009, raising the ambition of Scotland’s domestic targets in line with the UN Paris Agreement. This sets in law Scotland's target to reach net zero greenhouse gas emissions by 2045, and interim targets of 56%, 75% and 90% reductions in emissions by 2020, 2030 and 2040 respectively, relative to a 1990/1995 baseline. Annual emissions reduction targets are set for every other year between now and net-zero, and the targets include a fair share of emissions from international aviation and shipping.

4.265 The Scottish Government's Climate Change Plan was published in February 2018, setting out proposals and policies, across all sectors of the economy, for reducing greenhouse gas emissions to 2032. To reflect the increased target ambition of the 2019 Climate Change Act, the Scottish Government will lay an update to the Climate Change Plan before the Scottish Parliament by 30 April 2020.

4.266 The update to the Climate Change Plan will build on everything we've heard through the nationwide Big Climate Conversation and Plan specific stakeholder engagement, as well as advice from the Just Transition Commission and our independent advisers, the UK Committee on Climate Change.

Just Transition

4.267 In meeting its climate change targets the Scottish Government is taking the opportunity to help shape a more equitable and inclusive, growing economy. Just Transition principles have been embedded in the Scottish Government's Climate Change legislation and the recently established Scottish National Investment Bank also includes reference to the just transition principles.

4.268 Last year the independent Just Transition Commission was established to provide practical advice on how Scotland can maximise the economic and social opportunities of meeting our climate change targets, whilst managing the risks.

4.269 The Just Transition Commission started work on 31 January 2019. The Commission is chaired by Professor Jim Skea, an expert in energy systems and technological innovation. Membership also includes representation from third sector, environmental groups, trade unions, industry. Collectively, the Commission has expertise on labour markets and skills, social inclusion and regional cohesion, as well as climate change.

4.270 The Commission is working openly and transparently, and is travelling across Scotland, hearing the views of community groups, industry bodies, businesses and trade unions. It has recently published its interim report, with its final report due in January 2021.

Energy efficiency

4.271 Scottish Ministers have designated improving the energy efficiency of all of Scotland's buildings a National Infrastructure Priority. Energy Efficient Scotland, a key part of Scotland's Energy Strategy, is the culmination of this thinking and delivers across two key policy areas of Government: fuel poverty and climate change. It has two main objectives: to remove energy efficiency as a driver for fuel poverty and reduce greenhouse gas emissions through more energy efficient buildings and decarbonising our heat supply in our homes and buildings.

4.272 There is now a new definition of and targets for fuel poverty set out in the Fuel Poverty (Targets, Definition and Strategy) (Scotland) Act 2019, with a new fuel poverty strategy is due later this year. Key initiatives within the Scottish energy efficiency and fuel poverty landscape will increasingly shape policy delivery and outcomes; these include the Energy Efficiency Scotland suite of programmes, Local Heat and Energy Efficiency Strategies (LHEES) and the third iteration of the GB-wide Energy Company Obligation (ECO).

Wales

4.273 On 21 March 2016, the Environment (Wales) Act was granted Royal Assent. Part 2 of the Act focuses on action on climate change and provides the Welsh Ministers with powers to put in place statutory emission reduction targets (for 2020, 2030 and 2040) and 5-yearly carbon budgets to support their delivery.

4.274 The Environment (Wales) Act 2016 provides a statutory emissions reduction framework for Wales's low-carbon transition by establishing a system of targets and carbon budgets to 2050. It requires Welsh Ministers to reduce all emissions in Wales by at least 80% in 2050. However, the Welsh Government has accepted the Committee on Climate Change's recommendation to increase Wales's 2050 target to at least 95% and will ask the Senedd to legislate for the new target towards the end of 2020.

4.275 The Senedd passed regulations in December 2018 that set Wales' 2020 target at 27%, 2030 target at 45% and 2040 target at 67%. The Welsh Government has requested the CCC's advice on how the new 95% target for 2050 affects the interim targets and carbon budgets set in 2018, and will seek to amend the existing targets and budgets towards the end of 2020.

4.276 The Welsh Government must publish a plan for policies and proposals for meeting each carbon budget. The first plan was published in March 2019 and address the first budgetary period (2016-20). The second plan will be published in 2021. Many Welsh emissions occur in areas that aren't devolved so the UK Government has a very significant role in achieving Wales' targets.

4.277 In addition to the Environment (Wales) Act 2016, the Well-being of Future Generations (Wales) Act 2015 (The WFG Act), places sustainable development as the central organising principle of the Welsh Government, strengthening the governance arrangements of the Welsh Ministers and, significantly, specified public bodies in Wales. The Act requires public bodies to outline how they are looking to achieve a set of seven shared goals, which define the Wales people want to see in the future and to report on progress regarding this, including action on tackling climate change.

4.278 In September 2017, the Cabinet Secretary for Environment and Rural Affairs announced new, ambitious targets for energy generation in Wales:

- Wales to generate 70% of its electricity consumption from renewable energy by 2030
- 1 gigawatt (GW) of renewable energy capacity in Wales to be locally owned by 2030
- renewable energy projects to have at least an element of local ownership by 2020

4.279 By 2018, 25% of electricity generated in Wales was from renewable sources, and 50% of Wales' electricity consumption was met from renewable sources. There were nearly 69,000 renewable energy projects in Wales with a combined capacity of almost 3,900 MW. 83% of this capacity is renewable electricity, while 17% is renewable heat capacity. Wales had over 780 MW of renewable energy capacity owned by communities and locally owned organisations.

A Measuring progress against objectives: indicators

Employment

United Kingdom

Indicator	Current level	Reference period
Employment rate UK	76.6%	Dec 19 -Feb 20

England

Indicator	Current level	Reference period
Employment rate England	77.0%	Dec 19 – Feb 20

Northern Ireland

Indicator	Current Level	Reference period
Employment rate (population aged 16-64)	72.4%	Oct-Dec 19

Scotland

Indicator	Current Level	Reference period
Employment rate (population aged 16-64)	75.0%	Oct-Dec 19

Wales

Indicator	Current Level	Reference period
Employment rate (population aged 16-64)	73%	Dec 17-Feb 18

Education

England

Indicator	Current Level	Reference period
Percentage of young people recorded as being in a sustained education destination in the year after Key Stage 4	86%	2017-18
Percentage of young people who took mainly level 3 qualifications recorded as being in a sustained education destination in the year after 16 to 18 study (total mainstream schools and colleges)	58%	2017-18
Percentage of young people recorded as being in a sustained education destination in the year after 16 to 18 study (total mainstream schools and colleges)	48%	2017-18
Achievement of government-funded learners participating in Further Education (FE)	86.7% achieving at least upper secondary (English level 2) 63.8% at least tertiary (English level 4 and above)	2017-18
Number of government-funded learners participating in Further Education (FE), academic age 19 years and over.	2,068,200; of which 217,800 on a full level 2 course; 356,500 on a full level 3 course and 742,400 on an all age Apprenticeship	2018-19

Northern Ireland

Indicator	Current Level	Reference period
Per cent of school leavers achieving 5 or more GCSEs at grades A*-C (or equivalent) including GCSE English and maths	70.6%	2017-18
Per cent of school leavers entitled to free school meals achieving 5 or more GCSEs at grades A*-C (or equivalent) including GCSE English and maths	48.6%	2017-18

Scotland

Indicator	Current Level	Reference period
Highest qualification held by working age adults (19-64 years old)	79% achieving at least upper secondary (SCQF Level 5) and 49% at least tertiary (SCQF Level 7)	Q4 2018
Population aged 18-24 who are early leavers from education and training	10.3%	2017

Population aged 30-34 having completed tertiary education	54.5%	2018

Wales

Indicator	Current Level	Reference period
Percentage of 15 year olds achieving the level 2 threshold (5 or more A*-C GCSEs or equivalent) including English and/or Welsh first language and mathematics	60.3%	2015-6
Working age adults achieving NQF 2,3 and 4 +	NQF 2: 79% NQF 3: 59% NQF 4: 38%	2018
International comparison (within the OECD) of the qualification levels of the working age population	78% achieving at least upper secondary (UK level 2) and 39% at least tertiary (UK Level 4)	2018
16-18 year olds who are not in employment, education or training	10.3%.	2018 (provisional)

Social exclusion and poverty reduction

England

Indicator	Current level	Reference period
Children in workless households (England)	8.7%	2019
Children in relative income poverty (HBAI)	21%	2016-17 to 2018-19
Children in absolute income poverty (England)	17%	2016-17 to 2018-19
Children in combined low income and material deprivation (UK)	11%	2015-16
Target on the reduction of population at risk of poverty or social exclusion in number of persons	None The 'at risk of poverty or social exclusion rate' stood at 23.1% in 2018. This is an increase from 22.0% in 2017.	

Northern Ireland

Indicator	Current level	Reference period
Relative poverty before housing costs	16%	2017-18
Absolute poverty before housing costs	14%	2017-18

Scotland

Indicator	Current level	Reference period
Proportion of income earned by the top 10% compared to the bottom 40% (Solidarity target)	127%	2015-16 to 2017-18
Percentage of people living in relative poverty (below 60% of median income before housing costs)	17%	2015-16 to 2017-18
Percentage of children living in relative poverty (below 60% of median income before housing costs)	20%	2015-16 to 2017-18

Wales

Indicator	Current level	Reference period
People living in households in relative income poverty	24%	2015-16 to 2017-18
Children living in households in relative income poverty	29%	2015-16 to 2017-18
Working age adults living in households in relative income poverty	23%	2015-16 to 2017-18
Pensioners living in households in relative income poverty	19%	2015-16 to 2017-18

Research and development and innovation

United Kingdom

Indicator	Current level	Reference period
Total R&D expenditure	£37.1 billion	2018
Total R&D expenditure as % of GDP	1.71%	2018

Northern Ireland

Indicator	Current level	Reference period
Total R&D expenditure	£695 million	2017
Percentage of firms that are innovation active	34%	2016-18
Northern Ireland Executive target for Northern Ireland participants to secure at least €145m from Horizon 2020.	€86.8m	October 2019
R&D Expenditure as % of GVA	1.9%	2018
No. companies investing in R&D	961	2018
Knowledge Economy Jobs	40,250	2018
R&D employees	11,260	2018

Scotland

Indicator	Current level	Reference period
Gross R&D expenditure in percentage of Scottish GDP	1.63% (£2.5 billion)	2017
Percentage of firms that are innovation active	33%	2016-18

Wales

Indicator	Current level	Reference period
Gross R&D expenditure	£744 million	2017
Higher education performed R&D	£269 million	2017
Business enterprise R&D	£430 million	2018
Percentage of firms that are innovation active	37%	2016-18
Who performs R&D in Wales: Higher Education Government and research councils Business	 37% 2% 61%	

Climate change and energy

United Kingdom

Indicator	Targets	Current level	Reference period
The UK's Effort Sharing Decision	16% reduction of GHG emission levels by 2020 on 2005 levels	On track	2018
Energy consumed in the UK that has been produced from renewable sources.	15% of energy to come from renewable sources by 2020	10.5%	2018
Energy Efficiency Directive national indicative 2020 energy efficiency target	18% reduction in final energy consumption by 2020	16% reduction	2018

Northern Ireland

Indicator	Target	Current Level	Reference period
Greenhouse gas emissions	To contribute to UK 80% reduction of emissions by 2050	18% reduction	2017
Energy efficiency	Contribution to UK-wide target of 18% reduction in final energy consumption by 2020. NI contribution is 200GWh savings by 2020	247.9 GWh	2017
Indigenous renewable energy sources	40% by 2020	44.9%	1 October 2018 to 30 September 2019

Scotland

Indicator	Target	Current Level	Reference period
Reduction in greenhouse gas emissions	Under the Climate Change (Emissions Reduction Target) (Scotland) Act (2019), this will change to net-zero by 2045 at the latest, with interim targets for reductions of at least 56% by 2020, 75% by 2030, 90% by 2040	39.1% reduction, after taking account of trading in the EU Emissions Trading System. For 2017, emissions were reported against the targets in the Climate Change (Scotland) Act 2009. The Act provides for a fixed annual target for 2017 of 43.946 $MtCO_2e$, which has been missed	2017
Proportion of electricity consumption from indigenous renewable energy sources	Generate the equivalent of 100% of gross electricity consumption from renewable sources by 2020	76.2%	2018

Proportion of heat demand from renewables	11% of heat demand from renewables by 2020	6.3% (provisional)	2018
Reduction of final energy end-use consumption (energy efficiency)	12% reduction of final energy end-use consumption by 2020 on a 2005-2007 baseline	12.1% (provisional)	2018

Wales

Indicator	Target	Current Level	Reference period
Environment (Wales) Act	At least 80% reduction in the Net Welsh Emissions Account by 2050, with an interim target of 27% reduction by 2020 on 1990 levels.	25% reduction	2017
Renewable energy capacity		3,864MW (including 3,213MW electricity and 651MW thermal)	2018
% Welsh electricity consumption from renewables	70% by 2030	50%	2018
Renewable energy capacity in local ownership	1GW by 2030	778MW	2018

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