National Audit Office

A Short Guide to the

Department for Business, Energy & Industrial Strategy

September 2017

About this guide and contacts

This Short Guide summarises what the Department for Business, Energy & Industrial Strategy does, how much it costs, recent and planned changes and what to look out for across its main business areas and services.

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The National Audit Office scrutinises public spending for Parliament and is independent of government. The Comptroller and Auditor General (C&AG), Sir Amyas Morse KCB, is an Officer of the House of Commons and leads the NAO. The C&AG certifies the accounts of all government departments and many other public sector bodies. He has statutory authority to examine and report to Parliament on whether departments and the bodies they fund have used their resources efficiently, effectively, and with economy. Our studies evaluate the value for money of public spending, nationally and locally. Our recommendations and reports on good practice help government improve public services, and our work led to audited savings of £734 million in 2016.

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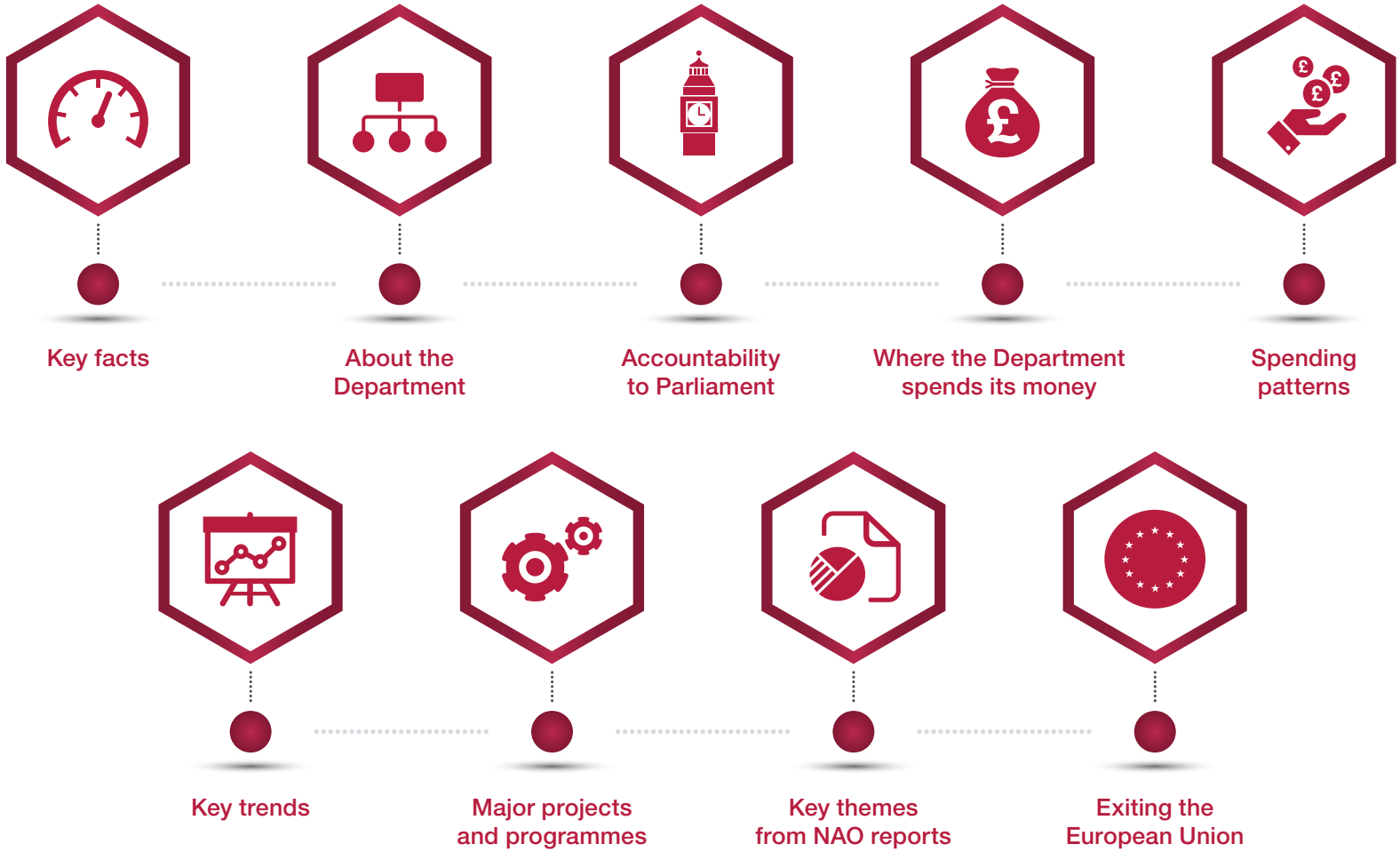
Overview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Key facts

£13.8 billion
the Department's expenditure across its core activities in 2016-17

19,227
full-time equivalent staff working for the Department or other bodies in the departmental group in 2016-17

1,900
responses to the Department's Industrial Strategy green paper

30%
proportion of national demand for electricity that the government aims to be met by renewable sources in 2020

£8.75 billion
spending by government on research and development in 2015, out of a total UK spend by all sectors of £31.6 billion

17
number of nuclear reactors and research sites being managed and decommissioned by the Nuclear Decommissioning Authority

£175 billion
capital investment by businesses in the UK in 2016

£1.4 billion
target cost saving for the Sellafield site by 2020

£4.7 billion
additional investment for research and development in the UK, between 2016 and 2021

11%
proportion of English households in fuel poverty in 2015 – representing around 2.5 million households

About the Department

The Department for Business, Energy & Industry Strategy (BEIS) was formed in July 2016, following the UK's decision to leave the European Union and subsequent Machinery of Government changes. It brings together the business and science policy portfolios of the former Department for Business, Innovation & Skills (BIS) and the full policy portfolio of the former Department for Energy and Climate Change (DECC). It aims to build links between industry, energy and climate change, and enable a united focus on markets, investors and consumers. As policy lead for more than 25 economic sectors, BEIS has one of the largest and most complex EU-exit portfolios, and EU-exit is relevant to all of its departmental objectives.

The Department's purpose, as set out in its *Annual report and accounts 2016-17*, is to:

"... drive forward the changes which will build an economy that works for everyone, so that there are great places in every part of the United Kingdom for people to work and for businesses to invest, innovate and grow."

It has four overarching objectives:

1 **Delivering an ambitious Industrial Strategy**

- Designing and coordinating the Industrial Strategy
- Investing in science, research and innovation
- Cultivating world-leading sectors
- Supporting businesses to start and grow
- Driving growth across the country

2 **Maximising investment opportunities and bolstering UK interests**

- Encouraging inward investment
- Working to ensure the economy is resilient and able to seize opportunities
- Promoting the interests of UK businesses and wider Department interests in EU and Euratom (European Atomic Energy Community) exit negotiations
- Building the international profile of the UK

3 **Promoting competitive markets and responsible business practices**

- Reforming corporate governance
- Promoting fairness in the labour market and improving working conditions
- Ensuring the UK has the right regulatory frameworks to help meet business and consumer needs
- Safeguarding UK interests in critical national infrastructure (CNI) and mergers

4 **Ensuring the UK has a reliable, low-cost and clean energy system**

- Ensuring that the energy system is reliable and secure
- Delivering affordable energy for households and businesses
- Taking action on climate change and low-cost decarbonisation
- Managing the energy legacy

Accountability to Parliament

Accounting Officers (AOs) in government departments are personally responsible and accountable to Parliament for proper stewardship of the resources allocated to their department. In BEIS, the Permanent Secretary is the AO. A key element of the accountability process is the duty of the AO to appear in front of the relevant select committee, in this case the BEIS Committee, to explain the performance of his/her department.

In a February 2016 report, *Accountability to Parliament for taxpayers' money*, the NAO found that:

- the incentives on an AO to prioritise value for money are weak compared with those associated with the day-to-day job of satisfying ministers; and
- in terms of the balance of priorities that AOs have to strike, the emphasis has shifted over a number of years towards political drivers – sometimes at the expense of safeguarding public value.

As a result, since mid-2017 each department has been required to produce an Accounting Officer System Statement. The Statement outlines accountability arrangements for all public money falling within the department's policy responsibilities, and all relevant accountability relationships within the department, such as for arm's-length bodies and other delivery partners.

BEIS expects to publish its Accounting Officer System Statement in autumn 2017.

Another new requirement is the introduction of Accounting Officer Assessments. AOs are now required to:

- examine whether they should go ahead with each major project, at the outset and at key decision points; and
- assess projects against the standards included in *Managing Public Money* (regularity, propriety, value for money and feasibility), and to raise concerns.

Key points from the assessments will be shared with Parliament, for all major projects that are approved.

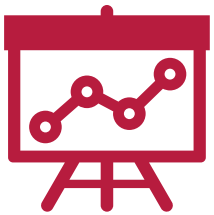
The four essentials of accountability

1. A clear expression of spending commitments and objectives

2. A mechanism or forum to hold to account

3. Clear roles and someone to hold to account

4. Robust performance and cost data



Source: Comptroller and Auditor General, *Accountability to Parliament for taxpayers' money*, Session 2015-16, HC 849, National Audit Office, February 2016

Where the Department spends its money

The core Department spent just over **£13.8 billion** in 2016-17.

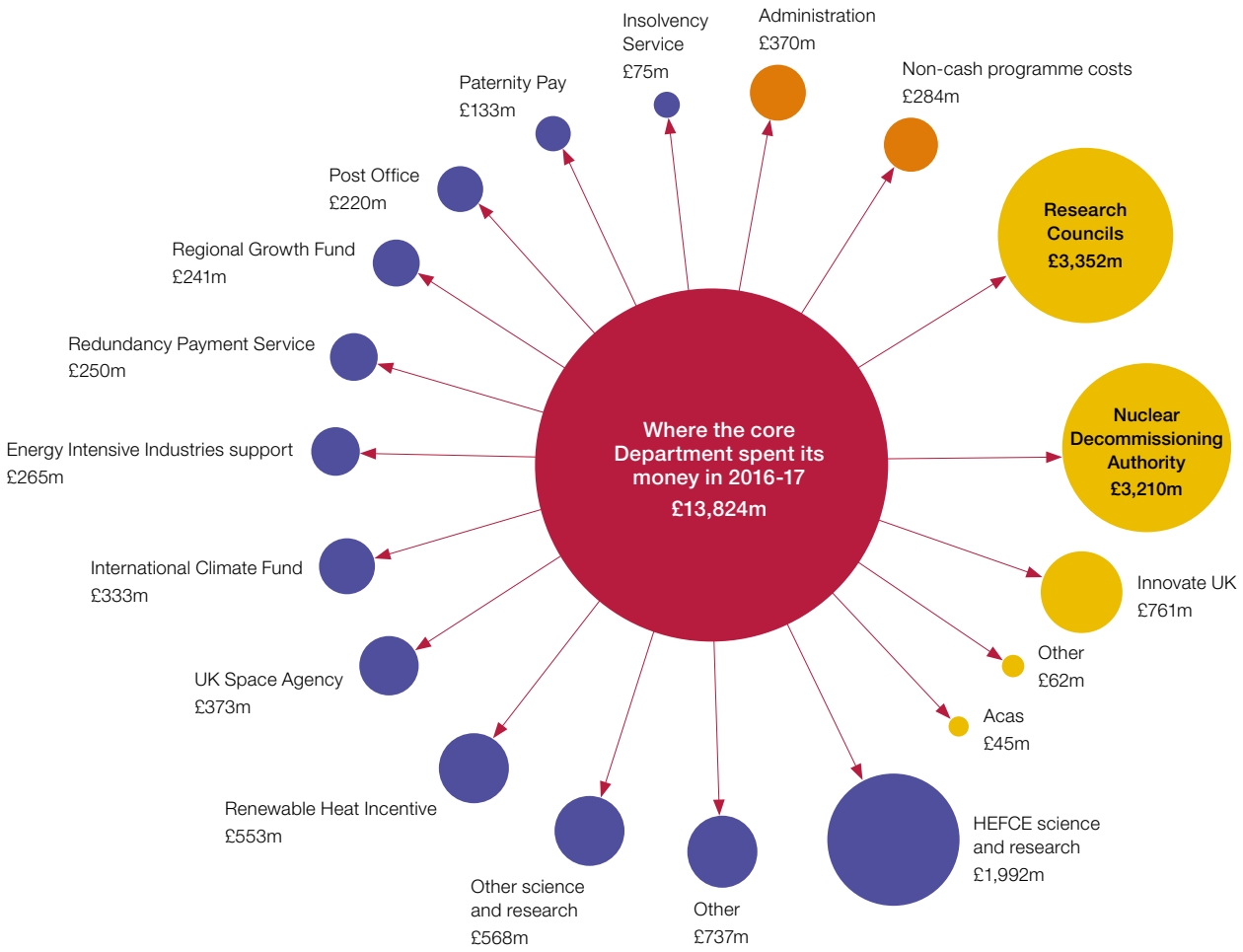
Of this, it spent just under **£3.4 billion** on the seven Research Councils and around **£3.2 billion** on the Nuclear Decommissioning Authority (NDA), a non-departmental body sponsored by BEIS.

The Department also spent significant amounts of money in other areas, including:

- Almost £2 billion of payments to the Department for Education, for science and research carried out via the Higher Education Funding Council for England (HEFCE);
- £545 million for delivering the Renewable Heat Incentive, a scheme to encourage homes and businesses to install heating systems using renewable sources of heat; and
- £333 million for International Climate Finance Official Development Assistance, as part of the government's commitment to spend 0.7% of the UK's Gross National Income on overseas aid;

The NDA received income worth £1 billion from commercial activities, which reduced its net cost to the Department. The income mainly came from management of spent fuel and waste, including reprocessing.

- **Internal and other costs**
  Administration and non-cash costs, for example, provisions and depreciation
- **Grant-in-aid**
  Funding payments to partner organisations
- **Programme delivery**
  Grants and the purchase of goods and services



Notes

1 This is the core Department's gross expenditure for the year.

2 Individual sums may not add up exactly to the total due to rounding.

Source: Department for Business, Energy & Industrial Strategy *Annual report and accounts 2016-17*

Spending patterns

BEIS planned to spend £31.3 billion in 2016-17, but its actual outturn was £16.3 billion. The £15.0 billion underspend was due to the Annually Managed Expenditure (AME), the demand-led element of the budget, being lower than expected. This was due to two factors:

- High wholesale electricity prices fed into lower Contracts for Difference (CfD) costs for BEIS.[1] This accounted for £11.3 billion of the £13.8 billion underspend on resource AME.
- Post Office Limited working capital funding (part of government shareholding) being less than the maximum allowable accounted for the remaining underspend on capital AME.

The outturn in 2016-17 was significantly lower than in 2015-16. This was mainly due to changes in the provision for the future costs of cleaning up the UK's earliest nuclear sites, which will be incurred by the Nuclear Decommissioning Authority.

Resource DEL fell, and capital DEL increased, largely due to a reclassification of science and research spend from resource to capital.

1 CfDs involve BEIS offering a fixed electricity price to generators to encourage them to develop low-carbon electricity.

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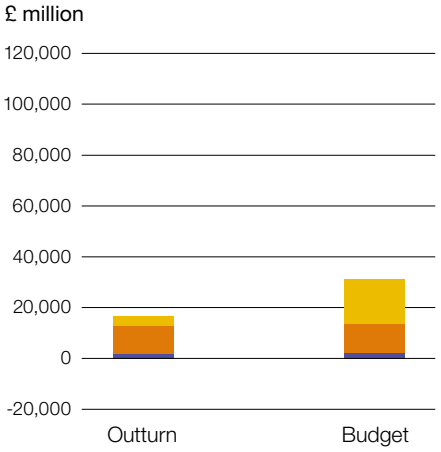
Comparison of budget to outturn

Comparison between 2016-17 budget and outturn



	Outturn	Budget
Capital AME	-15	311
Resource AME	3,523	17,412
Capital DEL	10,835	11,274
Resource DEL	1,972	2,337

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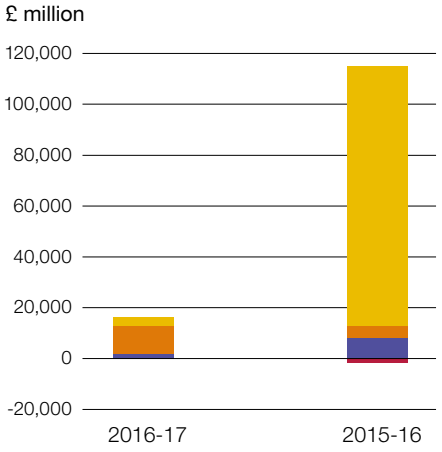
Comparison of outturn between years

Comparison between outturn in 2016-17 and 2015-16



	2016-17	2015-16
Capital AME	-15	-1,613
Resource AME	3,523	101,945
Capital DEL	10,835	4,882
Resource DEL	1,972	8,318

Note

1 **Total Managed Expenditure (TME)** – the total amount the Department spends, within this, budgets are classified as either: **Annually Managed Expenditure (AME)** – this variable amount is not controlled by the Department; or **Departmental Expenditure Limit (DEL)** spend – the amount set at Spending Reviews every three to five years, which is controllable.

2 These are then broken down further into **Resource** costs such as staffing, grants, consumables, maintenance and **Capital** costs such as buildings, land and computer systems.

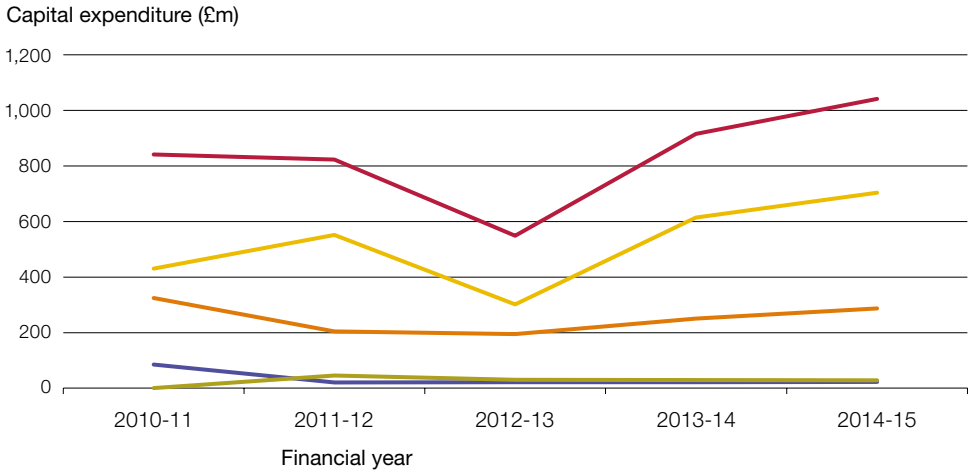
Source: HM Treasury Framework

Key trends

Objective 1: Delivering an ambitious Industrial Strategy

Capital expenditure on science

Investment in science is a key part of BEIS's plans for the future. Between 2012-13 and 2014-15, the former BIS's capital expenditure on science rose from less than £600 million a year to more than £1 billion a year.



Notes

1 Expenditure is not adjusted for inflation.

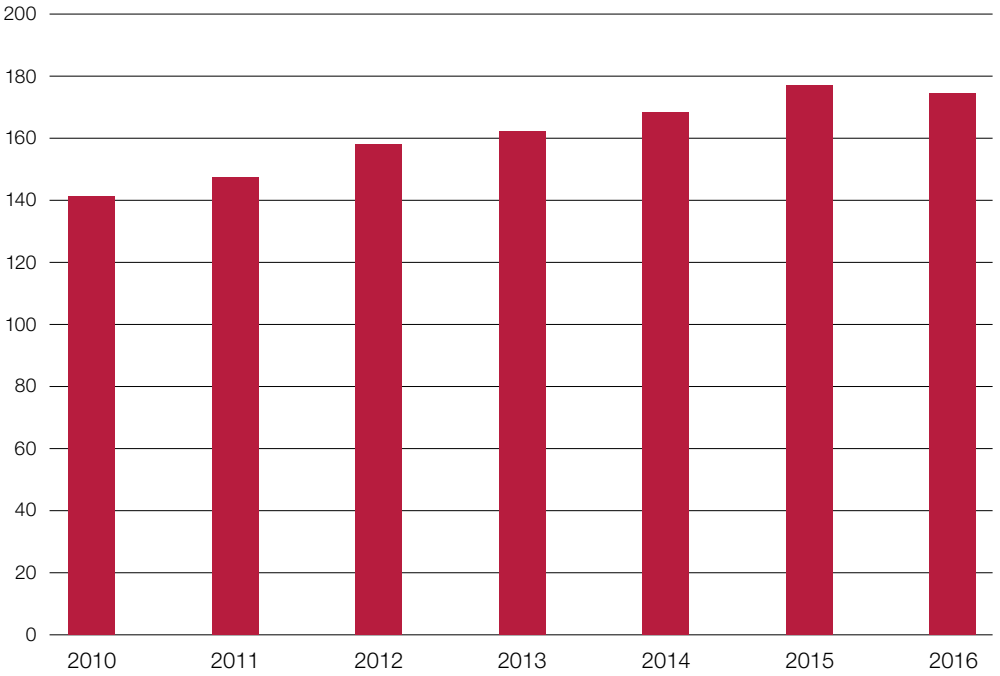
2 The former DECC also incurred science expenditure, with regard to combatting climate change.

Source: National Audit Office report, *BIS's capital investment in science projects*, Session 2015-16, HC 885, March 2016

Objective 2: Maximising investment opportunities and bolstering UK interests

Business investment in the UK

Business investment reached almost £180 billion in 2015, but fell back slightly in 2016 to £175 billion.



Note

1 'Business investment' is defined as net capital expenditure by businesses.

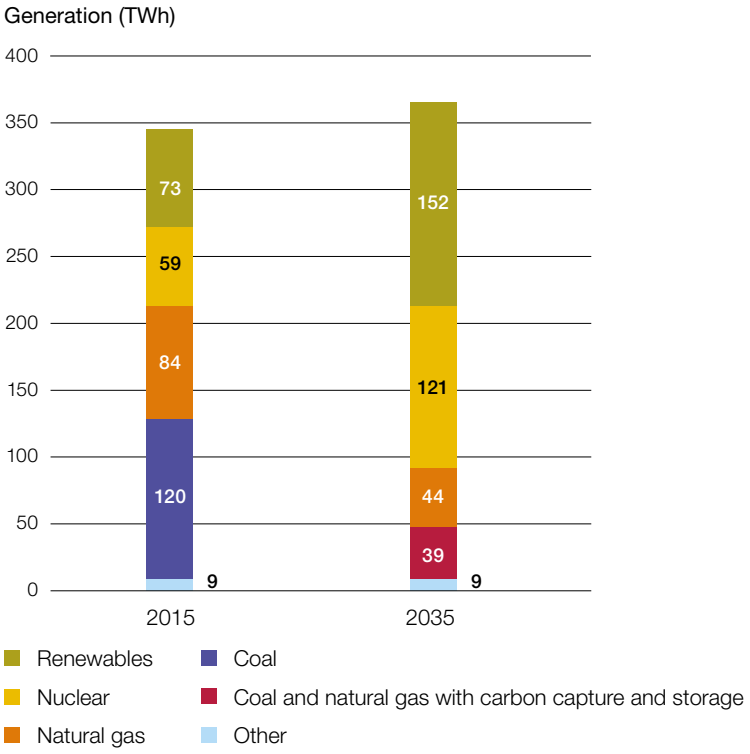
Source: Office for National Statistics data, presented in the Department for Business, Energy & Industrial Strategy *Annual report and accounts 2016-17*

Key trends *continued*

Objective 4: Ensuring the UK has a reliable, low-cost and clean energy system

Forecast changes in electricity generation

Renewable energy sources, alongside nuclear energy, will replace a large proportion of the electricity generation currently provided by fossil fuels.



Source: Comptroller and Auditor General, *Controlling the consumer-funded costs of energy policies: The Levy Control Framework*, Session 2016-17, HC 725, National Audit Office, October 2016

Major projects and programmes

These are the BEIS-led projects listed in the Government Major Projects Portfolio (GMPP) snapshot, as at September 2016.

Objective 1: Delivering an ambitious Industrial Strategy

New Polar Research Vessel. Replacing two existing research and supply vessels with one dual-purpose ship, due to come into service in 2019-20. The single-ship option will cost £225 million during the construction phase and is planned to save £102 million over 30 years (including maintenance costs).

Objective 3: Promoting competitive markets and responsible business practices

Local Land Charges (LCC) Programme.
A programme, underpinned by legislation, to deliver a single national LLC Register Service for England (currently 326 local ones), with consistency of customer experience and fees. Aims to be completed in 2023. Cost to date has been £13.7 million. Total cost (including non-government costs) is expected to be £193 million.

Objective 4: Ensuring the UK has a reliable, low-cost and clean energy system

Magnox and Research Sites Restoration Limited (RSRL) Parent Body Organisation (PBO) Competition. Aims to secure a reduction in the cost of decommissioning 12 nuclear legacy sites between 2014 and 2028. A contractor PBO was appointed to lead the work in 2014, but this contract is due to be terminated early.

Smart Metering Implementation Programme.
To roll out smart electricity and gas meters to all homes and small businesses in Great Britain by the end of 2020. Aims to provide accurate bills and faster switching, enable better-informed decisions on energy consumption and produce a more flexible energy system. The estimated cost is £11 billion, with forecast benefits of £17 billion.

Sellafield Model Change. Creating the environment for success at Sellafield by moving from a PBO model to a subsidiary model. Sellafield clean-up expected to cost £30 billion across the life of the project.

Heat Networks Investment Project. To provide £320 million of capital support, until 2021, for the construction of heat networks projects in England and Wales.

Project Eagle. The sale of government's one-third shareholding in Urenco, a uranium enrichment company. Government is in discussion with other shareholders about the basis of any such sale. In 2017, the GMPP data stated: "The proposed corporate restructuring of Urenco that would have enabled a possible future sale of HM Government's stake in the company is now not going ahead as all the parties involved were unable to agree and we will continue to assess all our options." Reports have suggested the sale could be worth £3 billion. (This project has since been put on hold.)

Geological Disposal Facility (GDF) Programme.
Aims to find a site on which to construct a safe, secure and environmentally responsible permanent geological disposal facility for higher-activity radioactive waste across England, Wales and Northern Ireland. Completion targeted by 2040, at a total cost of £11.75 billion. In 2017, the BEIS GMPP data reported: "Planning schedules are in line with the ambition to identify a site and construct a GDF by the 2040s and are kept under review by the developer, Radioactive Waste Management Ltd."

Key themes from NAO reports

The NAO has found a number of recurring themes that are relevant to BEIS's overarching objectives.

Objective 1: Delivering an ambitious Industrial Strategy

Given that the Industrial Strategy is at a formative stage following the green paper consultation, the NAO has not reported on it specifically. But there are lessons about the management of large, cross-cutting programmes that can be drawn from other NAO outputs. For example:

- it is important to define what 'success' looks like in a complex programme, aside from just increased activity levels (see Delivering value through the apprenticeships programme);
- project and investment decisions need to be made based on good-quality information and with clear decision-making processes in place, in order to optimise the benefits of government investments (see BIS's capital investment in science projects); and
- recurring weaknesses include an absence of portfolio management at both departmental and government level; lack of clear, consistent data with which to measure performance; poor early planning; lack of capacity and capability to undertake a growing number of projects; and a lack of clear accountability for leadership of a project (see Delivering major projects in government: a briefing for the Committee of Public Accounts).

Objective 2: Maximising investment opportunities and bolstering UK interests

When developing effective oversight and governance arrangements for large-scale infrastructure projects, government should draw upon best practice from other, experienced, areas within government and internationally (see Hinkley Point C).

Objective 3: Promoting competitive markets and responsible business practices

Government needs to be more realistic about consumers' and companies' motivations to ensure it achieves its own aims.

Regulators and government need to work more closely together to clarify their respective responsibilities if overall support for vulnerable consumers is to be value for money (see Vulnerable consumers in regulated industries, and Protecting consumers from scams, unfair trading and unsafe goods).

Government does not know how much cost businesses incur as a result of its existing business regulations. This means that it cannot know how ambitious its target for reducing regulatory costs is (see The Business Impact Target: cutting the cost of regulation).

Government needs to have robust mechanisms in place to coordinate and oversee the behaviours and outcomes of competition and consumer regimes (see The UK competition regime and Protecting consumers from scams, unfair trading and unsafe goods).

Key themes from NAO reports *continued*

Objective 4: Ensuring the UK has a reliable, low-cost and clean energy system

At the beginning of a project, clear objectives need to be set out, understood and acceptable to all stakeholders. Government needs to have a strong understanding of the interests and motivations of all relevant stakeholders (see Green Deal and Energy Company Obligation).

Uncertainties exist in projects using innovative technologies with high upfront costs and unclear benefits accruing over the long term. The potential for long-term benefits needs to be balanced with short-term affordability considerations (see Carbon Capture and Storage: the second competition for government support).

Government strategy with regard to certain technologies can present particular value-for-money risks to taxpayers and consumers that need to be managed (see Nuclear power in the UK and Hinkley Point C).

Exiting the European Union

The UK's planned exit from the EU has significant implications for the Department. As the policy lead for more than 25 economic sectors, BEIS has one of the largest and most complex EU-exit portfolios, being responsible for work that covers energy and climate change, science, competition and innovation.

The Department has outlined a set of priorities across its objectives including:

Objective 1: Delivering an ambitious Industrial Strategy

Providing grants and funding for research and development; supporting finance for infrastructure and business, underpinned by a skilled workforce.

Science, innovation and skills:

- Understanding the long-term funding implications of leaving EU-funded science and innovation programmes such as Horizon 2020.
- Analysing the potential wider impacts of the UK's negotiations on freedom of movement for skills and research.
- Understanding and maintaining business confidence on issues such as access to skilled labour.

Objective 2: Maximising investment opportunities and bolstering UK interests

Objective 3: Promoting competitive markets and responsible business practices

Making UK businesses attractive to investors, along with employment opportunities, and setting a fair regulatory and legislative environment for businesses to operate, with effective competition and market mechanisms that bring choice to customers.

Regulation and legislation:

- Working closely with more than 46 agencies and public bodies, including a number of regulators, in order to: understand the regulatory impacts and opportunities of leaving the EU; and ensure the UK's future regulatory framework and supporting legislation is operable and effective.

Market access and business confidence:

- Working with other departments to secure effective trade relationships.
- Maintaining business and investor confidence within the UK, and positioning the UK to attract foreign direct investment.
- Leading on the government's understanding of sectoral implications of the EU-exit negotiations by analysing the impacts and opportunities on a wide range of sectoral and cross-cutting interests (such as labour market access, data protection and consumer interests).

Objective 4: Ensuring the UK has a reliable, low-cost and clean energy system

Safeguarding energy systems which interact with market mechanisms that ultimately meet customer needs, in a sustainable and secure manner.

The UK's energy sector:

- Shaping the nature of the UK's relationship with EU systems and rules for cross-border trading in electricity and gas.
- Facilitating uninterrupted trade and safeguarding arrangements for nuclear power after the UK exits the Euratom Treaty.
- Considering options and implications for the UK's future engagement with the EU Emissions Trading System.
- Supporting economic and investment opportunities within the UK's energy sector.

To ensure that the risks associated with EU-exit negotiations are mitigated, BEIS has stated in its *Annual report and accounts 2016-17* that it intends to:

- dedicate a full-time team to oversee and monitor EU-exit negotiations;
- engage intensively, including at Permanent Secretary and Director General level, with the Department for Exiting the EU and the Prime Minister's office to maximise influence;
- put clear, well-organised and well-communicated programme management structures in place; and
- work to identify its EU-exit priorities and defining the interdependencies between policy teams.

Issues relating to EU-exit that the BEIS Select Committee may wish to explore

Across government the NAO considers that a **successful implementation of Brexit** will require:

- strong collaboration and coordination across departments;
- a clear sense of prioritisation at departmental and cross-departmental level, including decisions to stop or delay projects; and
- a robust assessment of the required capability and a cross-government strategy to address any gaps.

If the Committee chooses to examine how BEIS is organising itself to deliver a successful EU-exit, it may wish to explore the following issues:

- **Coordination across government**
  Departments should be clear about how the actions they are taking align with plans across government to deliver a successful EU-exit.
- **Prioritisation of activities**
  Departments will need to prioritise their activities in response to EU-exit. We would expect this to involve stopping or pushing back some activities. The activities that are prioritised will need to incorporate a strong emphasis on delivery as well as policy.
- **Staffing and resources**
  Departments will need to have assessed what skills and resources are needed to deliver a successful EU-exit in the short to medium term. Filling any gaps may mean recruiting staff externally, and a movement of staff across government to where they are needed most.

Investing in science, research and innovation

How is it delivered?

In 2015, the UK spent £31.6 billion on research and development. Government's share of expenditure totalled £8.75 billion. Other funding sources included the business sector, overseas funders and not-for-profit organisations.

BEIS is responsible for the majority of government spending on science. It funds research and development principally through its partner organisations: the Research Councils; Innovate UK; and the Higher Education Funding Council for England. Other government departments, including the Department for Environment, Food & Rural Affairs, the Ministry of Defence, the Department for International Development and the Department of Health, fund research and development specific to their own policy areas.

The government's Industrial Strategy green paper emphasised the importance of continued government investment in science, research and innovation for economic growth.

Since 2014, the government has committed additional funding for science. In particular:

- £4.7 billion between 2016 and 2021 to increase research capacity and business innovation across the UK's research base and to create a new cross-disciplinary Industrial Strategy Challenge Fund to support collaborations with business; and
- new pots of funding to support research to address the challenges faced by developing countries. These include the Newton Fund (£735 million in total available since 2014), the Global Challenges Research Fund (£1.5 billion in total committed to 2020-21), and the Ross Fund specifically to tackle infectious diseases (£1 billion available in total). BEIS, along with various other partners, is responsible for allocating this funding.

Spending on research and development in the UK, 1995–2015

Spending increased from around £21 billion in 1996 to almost £32 billion in 2015. The amount contributed by business has fluctuated over the years in particular, and there has been a notable increase in the contribution from overseas sources.

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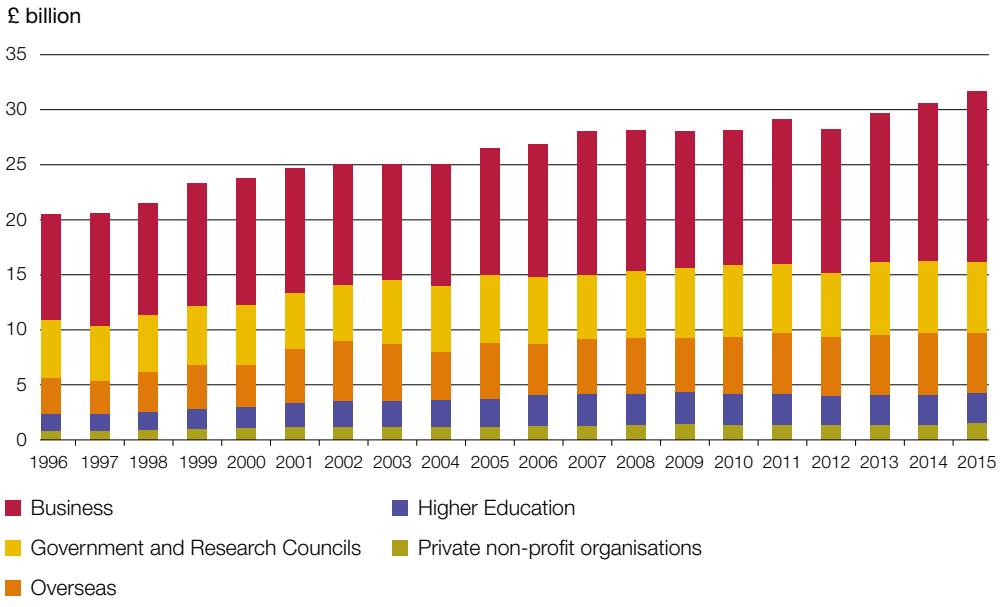
Spending on research and development in the UK, 1995–2015

Spending increased from around £21 billion in 1995 to almost £32 billion in 2015. There has been a notable increase in the contribution from overseas sources



Source: Office for National Statistics, *UK gross expenditure on research and development: 2015 Statistical bulletin*, March 2017

In your area

There is a wide range of publicly funded infrastructure, across the UK and overseas, which supports research and development activity.

Since 2014-15, the Department's annual expenditure on science infrastructure has exceeded £1 billion each year. The 2015 Spending Review committed £5.9 billion of funding in total between 2016 and 2021.

Our 2016 report on *BIS's capital investment in science projects* highlighted concerns about the lack of: a clear process for deciding which projects are investment priorities; and good-quality information such as what projects could cost to run. It concluded that avoidable shortcomings undermined BIS's ability to prioritise and deliver value for money across the range of its capital funding of scientific research.

The Department acknowledged in response that the high-level strategic landscape was somewhat fragmented, and anticipated that the establishment of UK Research and Innovation (UKRI) would enable better coordination and prioritisation across the funding landscape.

Types of science infrastructure in receipt of BEIS funding

Research infrastructure at universities

Ranges from small laboratories to more extensive facilities.

Investment in universities' infrastructure also includes the UK Research Partnership Investment Fund, designed to encourage strategic partnerships between universities and the private or charity sectors.

Campuses

Provide hubs for specialist research, often encouraging investment and collaboration from industry.

Examples include the Babraham Research Campus, a biomedical research and innovation hub, and the Research Complex at Harwell, which promotes cross-disciplinary research between physics and life sciences.

Institutes

Specialise in a particular field or undertake multi-disciplinary research.

Examples include the Pirbright Institute for animal health and the Francis Crick Institute for bio-medical research.

National facilities

Large-scale facilities and equipment such as particle accelerators, oceanographic research vessels, supercomputers or data centres, which may be beyond the capacity of large companies to provide.

Publicly and privately funded scientists apply to use facilities for their experiments.

International facilities

The UK participates in international facilities such as CERN (the European Organisation for Nuclear Research) where collaboration between scientists and nations makes the infrastructure and experiments more affordable.

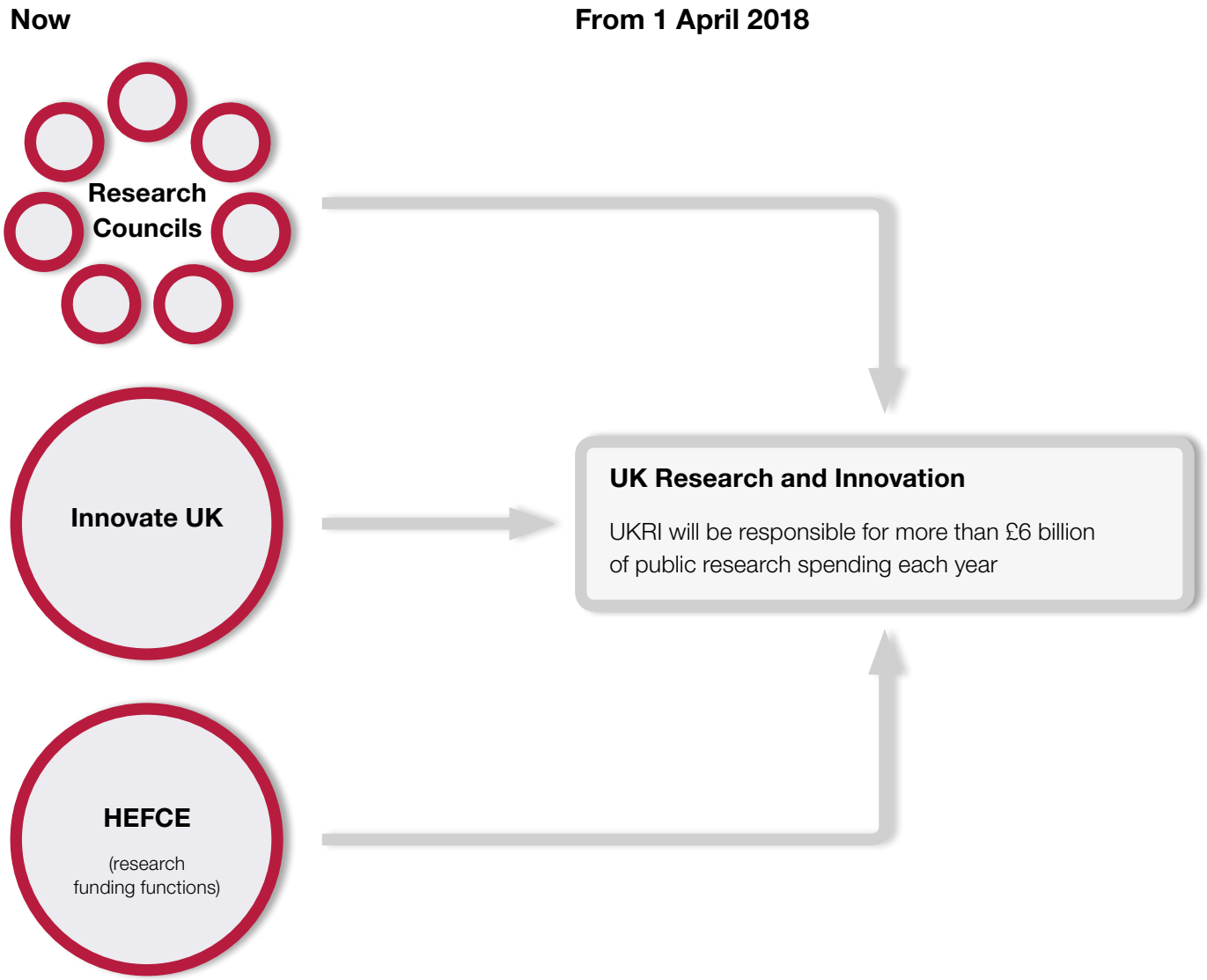
Other examples are the UK's participation in the European Space Agency and in the European Synchotron Radiation Facility.

Recent and planned developments

The UK research environment is undergoing significant change. In 2015, *Sir Paul Nurse's review of the Research Councils* recommended better coordination of the research landscape and new cross-government arrangements to facilitate strategic research priorities.

In response, the government committed to establishing a new body, UK Research and Innovation (UKRI), to bring together the seven Research Councils, Innovate UK and Research England with the aim of providing a joined-up voice and a more coherent strategic approach to achieving value for money from public investment in research and innovation.

Once established on 1 April 2018, UKRI will become a single organisation with nine distinct councils and a strategic centre. UKRI will be led by a CEO, Sir Mark Walport, who will act as a single Accounting Officer and lead the overall direction of UKRI across research disciplines. The nine councils will have delegated autonomy and authority on matters within their remit, each led by an executive chair who will report to UKRI's CEO.



What are the things to look out for?

The impact of changes to the research funding landscape

The creation of UK Research and Innovation (UKRI) is intended to improve strategic direction, cross-cutting decision-making and the balance of funding across areas of research.

UKRI's performance in developing a clear strategy from fundamental research through to business innovation, and delivering the expected benefits, will be key to getting the desired improvements in economic growth through the government's continued investment in science, research and innovation.

Implications for UK science of exiting the European Union

The UK is a net recipient of EU funding for research and development. Between 2007 and 2013, the UK contributed €5.4 billion to EU science and received €8.8 billion.

The extent to which the UK will be able to access EU funding in the future depends on the outcome of its negotiations for withdrawal. In addition, withdrawal could affect the UK's access to skills and the freedom of movement of researchers, as well as access to EU facilities and research programmes.

Information on existing science infrastructure

To maximise the value of funding available to invest in science infrastructure projects, and to take informed decisions on future investments, BEIS needs good information on existing infrastructure and its ability to support research priorities.

In its report on BIS's capital investment in science projects the NAO recommended that BIS should conduct a systematic analysis of the existing infrastructure.

Cross-government funding of research

Sir Paul Nurse's review of the Research Councils recommended better coordination of the research landscape and new cross-government arrangements to facilitate strategic research priorities.

The NAO has work under way examining the funding and oversight of research and development across government. A report is due to be published in autumn 2017.

Delivering an Industrial Strategy

How is it delivered?

BEIS is coordinating the development of a new Industrial Strategy, which aims to "improve living standards and economic growth by increasing productivity and driving growth across the whole country". It published a green paper on its Industrial Strategy in January 2017, which generated nearly 1,900 consultation responses.

The green paper set out 10 'pillars' upon which the Strategy should be built: Investing in science, research and innovation; Developing skills; Upgrading infrastructure; Supporting businesses to start and grow; Improving procurement; Encouraging trade and inward investment; Delivering affordable energy and clean growth; Cultivating world-leading sectors; Driving growth across the whole country; and Creating the right institutions to bring together sectors and places.

While its purpose was to outline a broad strategic direction, the green paper also highlighted additional national and local funding plans across a range of sectors, including:

A new National Productivity Investment Fund that aims to add £23 billion in high-value investment from 2017-18 to 2021-22.

£4.7 billion of additional research and development funding by 2020-21.

£1.8 billion from the Local Growth Fund for a new set of Growth Deals between government and Local Enterprise Partnerships.

£2.6 billion for improvements in transport projects.

£400 million for the British Business Bank, to support later-stage venture capital investments by the private sector.

£270 million to accelerate the transition to ultra-low emission vehicles.

£170 million of capital funding to create Institutes of Technology, delivering higher technical education in STEM subjects (Science, Technology, Engineering and Maths) to meet the skills needs of local employers.

Recent and planned developments

The Industrial Strategy Commission, an independent inquiry body, published its report *Laying the Foundations* in July 2017. It concluded that there was a pressing need to:

- strategically coordinate interactions between public and private sectors;
- address persistent weaknesses in the UK economy such as low productivity, entrenched geographical inequalities and centralisation;
- mobilise the private sector to drive innovation and productivity growth across the economy;
- establish a clear rationale for public investment to support industrial development;
- provide a framework for science and innovation investment; and
- achieve and maintain consensus and buy-in from policy-makers, business and the public about the Industrial Strategy's objectives.

The Spring Budget 2017 set out detail relating to investment by the National Productivity Investment Fund:

A new National Innovation Network to trial and demonstrate 5G applications, and a series of local projects to accelerate market delivery of fast and reliable full-fibre broadband.

Competitive allocation of £690 million to local authorities to get local transport networks moving.

Development of artificial intelligence and robotics, and batteries for the next generation of electric vehicles.

£300 million of funding to develop research talent, including through creating an additional 1,000 PhD places.

What are the things to look out for?

Industrial Strategy Commission

The recent *Laying the Foundations* report by the Industrial Strategy Commission noted that: "A new strategy must be shaped by analysis of current economic weaknesses and challenges and how to address them, an assessment of past and present policy shortcomings, and an understanding of future anticipated change."

It also reflected that: "The UK's current and past industrial policies and practices have significant shortcomings and are not sufficient to address the challenges facing the UK nor capitalise on future opportunities. Lessons must be learnt from them and the decision-making processes and understanding that underpins them altered."

The Industrial Strategy Commission is due to produce its final report in October 2017. It is likely to comment on the prospects for a stable, long-term strategy against the back-drop of EU-exit.

White paper

An Industrial Strategy white paper is due to be published in late 2017. It is likely to include some new approaches, taking on board responses to the green paper.

Consensus and buy-in

As emphasised in the first Industrial Strategy Commission report, a key challenge will be how to achieve and maintain consensus and buy-in from policy-makers, business and the public.

Ensuring a reliable, low-cost and clean energy system

How is it delivered?

This section covers one of the Department's key responsibilities – delivering energy for households and businesses.

Energy policy is largely 'reserved', which means that BEIS oversees policy and legislation for the entire United Kingdom. Some areas, such as tackling fuel poverty, are devolved to Scotland, Wales and Northern Ireland, although the extent of devolution varies between countries.

BEIS's three main energy objectives are often referred to as its 'trilemma', because they can conflict and policies can contribute to, or impact upon, more than one of its objectives. BEIS has a number of delivery partners to help deliver the objectives of the 'trilemma'.

The energy trilemma objectives

Energy security:

Ensuring there is a secure and resilient energy system. The UK faces a set of challenges with regard to the security of electricity supply in the coming decades, due to existing facilities reaching the end of their productive lives and growing demand due to factors such as an increased uptake in electric vehicles.

Affordability:

Keeping energy bills as low as possible for households and businesses.

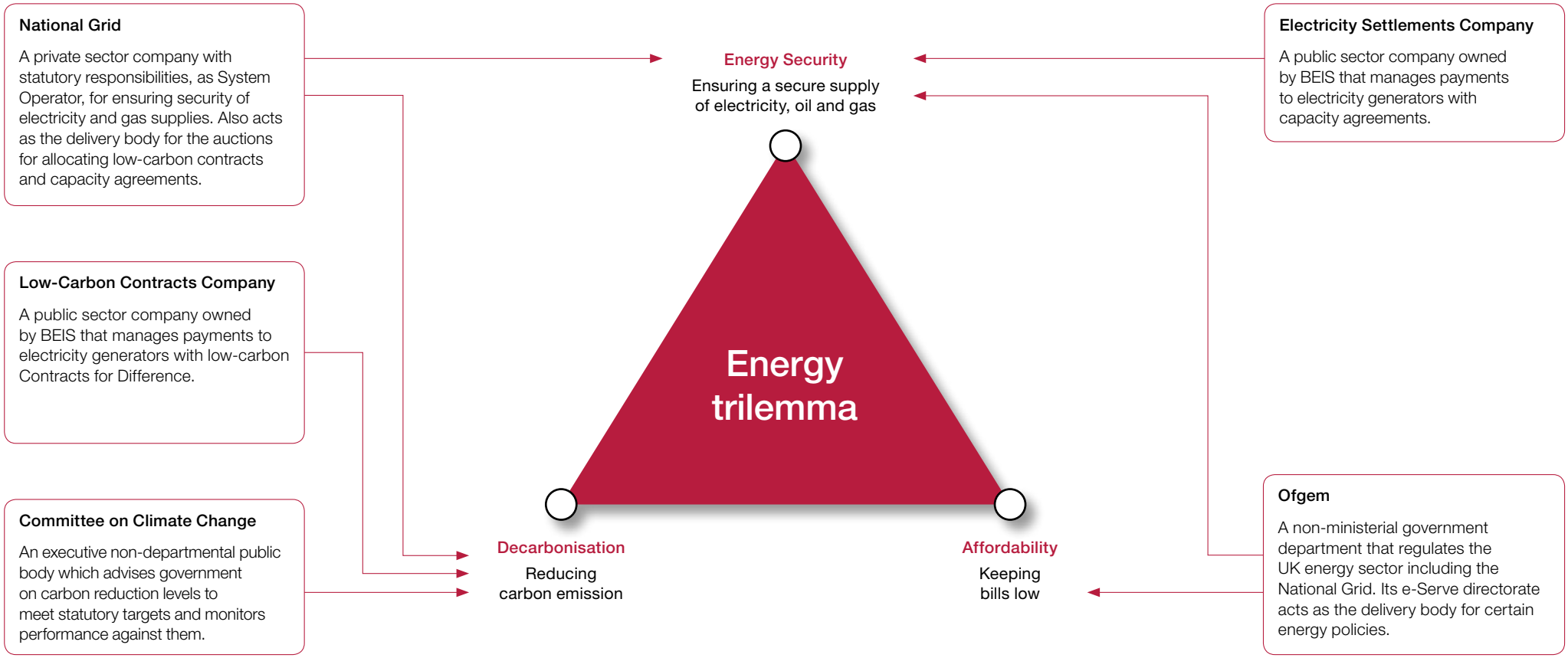
Decarbonisation:

Securing ambitious international action on climate change and reducing carbon emissions cost-effectively at home. The Climate Change Act 2008 requires the UK to reduce its carbon dioxide emissions in 2050 by 80% compared to 1990 levels.

How is it delivered? *continued*

The energy trilemma

The Department faces the complex challenge of delivering an energy supply that is, at the same time, sufficiently secure, affordable and low-carbon in nature.



Source: National Audit Office *Departmental Overview: Department for Business, Energy & Industrial Strategy 2015-16*

In your area

Fuel poverty

Low-income households that cannot sufficiently warm their houses at reasonable cost are considered fuel-poor. Households in the two lowest income groups spend nearly 10% of their income on energy (compared with 6% across all households) and often under-heat their homes. Insufficient heating is associated with poor health and with a large number of deaths during winter.

Some 2.5 million households in England were in fuel poverty in 2015, which is 11% of English households. This is an increase of 0.4% compared with 2014. However, the average fuel poverty gap (the amount needed to meet the fuel poverty threshold), fell by 5.6% between 2014 (£371) and 2015 (£353).

The Department has currently in place two policies to support fuel-poor households: the Warm Home Discount, a one-off £140 annual payment towards the energy bill; and the Energy Company Obligation, which requires energy suppliers to install energy efficiency measures, such as insulation and new boilers, in vulnerable people's homes.

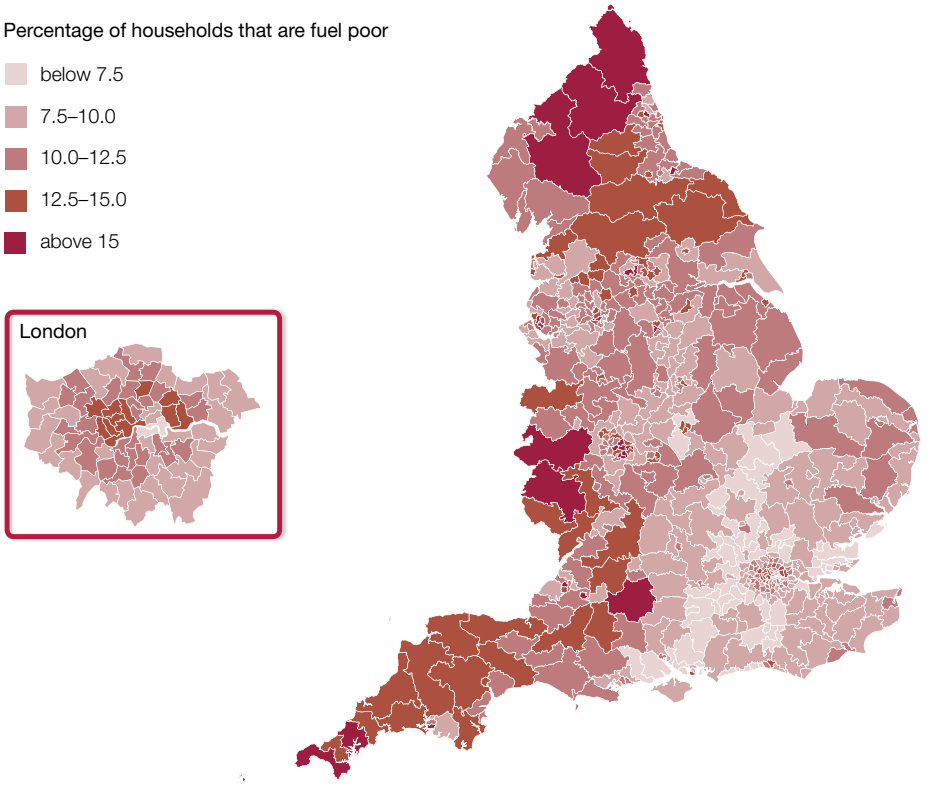
Measuring fuel poverty

Fuel poverty in England is measured using the Low Income High Costs indicator: households are in fuel poverty if the cost of adequately heating their home is above average, and that cost would leave them with income below the official poverty line. The devolved administrations in Northern Ireland, Scotland and Wales define fuel-poor households as those who need to spend more than 10% of their income to maintain an adequate heating regime.

Zoom Out Zoom In +

Share of fuel-poor households in 2015 (England only)

The greatest concentrations of fuel-poor households tend to be in the far north, west and south-west of England, and also in some parts of Greater London



Note

1 Fuel poverty is a devolved matter and constituency-level statistics are available for England only.

Source: National Audit Office analysis of HM Government, *Sub-regional fuel poverty data 2017*, June 2017

In your area *continued*

The generation of low-carbon energy

The Department supports the UK's capacity to generate new low-carbon energy through 'Contracts for Difference', which fix the price received for electricity generated. The contracts typically last for 15 years. Starting in 2014, the Department has awarded more than 40 Contracts for Difference so far to developers of new low-carbon generating capacity, primarily wind and solar power.

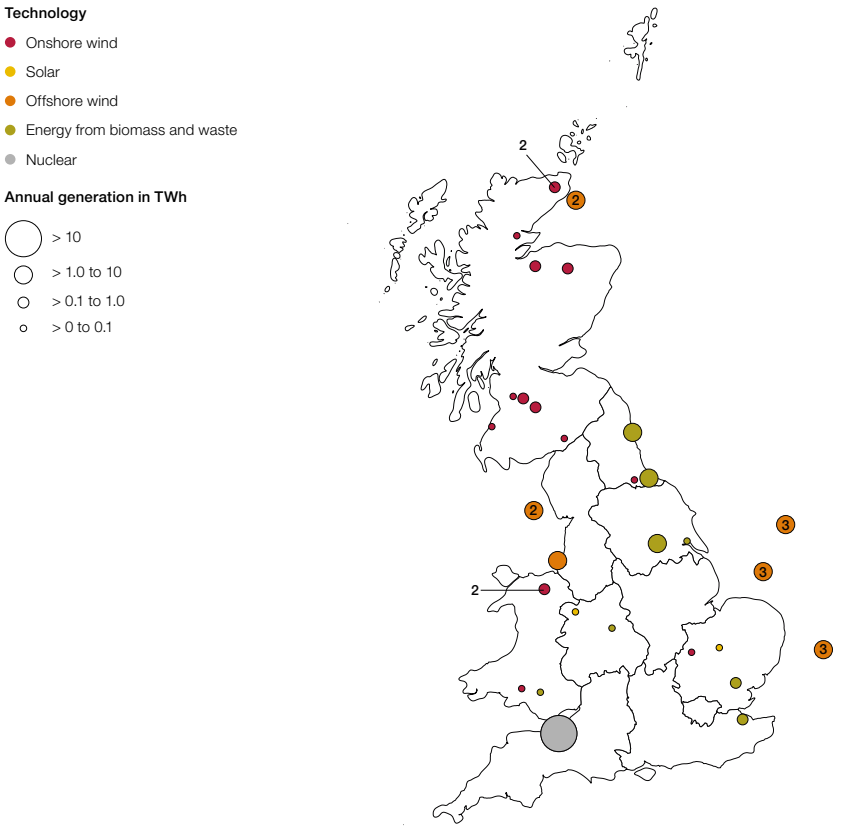
The geographic distribution of low-carbon energy is driven by a number of factors, including the local availability of energy sources. For example, solar energy is more abundant at lower latitudes, and so its tends to be used more in southerly regions.

New low-carbon energy infrastructure can benefit local areas by providing jobs, but the benefits are also felt nationally, as the electricity these projects generate is traded in national markets. The government's aim is that 30% of national electricity demand will be met by renewable energy in 2020.

Zoom Out Zoom In +

Generation of new low-carbon energy supported by Contracts for Difference in 2025-26

Low-carbon energy will be delivered by a range of facilities, across the country and offshore



Note

1 Each circle on the map represents one Contract for Difference, apart from where a number label is used to indicate otherwise.

Source: National Audit Office analysis Low Carbon Contracts Company's Contracts for Difference register; and load factors used for Renewables Obligation budget-setting in 2015-16

Recent and planned developments

Security of supply

The Department has three key plans to ensure there is sufficient energy supply.

- **Ensuring adequate supply during peak periods:** Making agreements with energy generators that they will provide capacity at peak times if it is needed. The Department has run three rounds of auctions through its Capacity Market mechanism to make these arrangements, which last for between one and 15 years. The first period during which these agreements will be in place will be winter 2017-18.
- **Increasing available sources of low-carbon energy:** Latest auctions for further Contracts for Difference are due to conclude in autumn 2017.
- **Enabling the UK to import electricity:** The Department plans to facilitate construction of seven new interconnectors with other countries by 2022, which will enable the import of electricity.

Decarbonisation

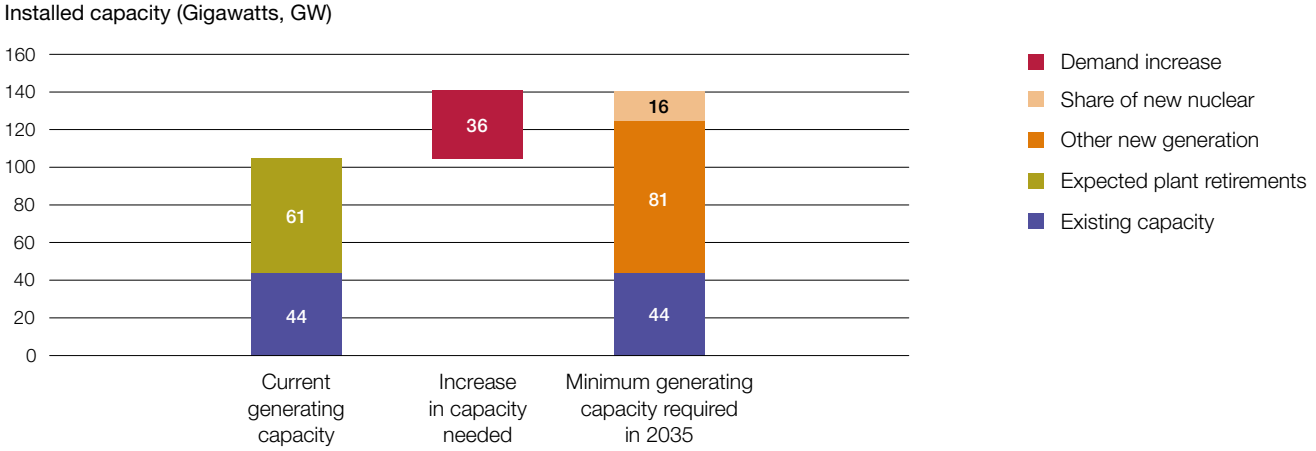
The Department has committed to publishing its Clean Growth Plan by the end of 2017, which will set out how government will meet interim carbon emissions targets towards the 2050 target. The Department has stated that this will set out a plan for deploying Carbon Capture and Storage (CCS), which many analysts consider to be central to lowest-cost decarbonisation. The Department cancelled its latest competition to support the first CCS plants in January 2016 after HM Treasury withdrew its funding.

Affordability

The government announced during the 2016 Autumn Statement that it would not be continuing its Levy Control Framework mechanism, which caps the cost of policies supporting investment in low-carbon generation up to 2020-21. The NAO reported on the Framework in October 2016, finding that there were weaknesses in the Department's forecasting of the costs of its policies, and that it had not maximised the potential benefit for increasing investors' confidence.

The electricity system challenge: projections of UK electricity capacity to 2035

The Department projects that the UK will need just over 140 gigawatts (GW) of electricity capacity by 2035. Due to existing plants being closed down, 97 GW will need to be generated from new sources. Of this total, it projects 16 GW will come from new nuclear power stations



Source: National Audit Office analysis of Department for Business, Energy & Industrial Strategy energy and emissions projections data, 2016

What are the things to look out for?

Capacity to generate energy

Continuing transition to a low-carbon electricity supply system

Bringing forward a pipeline of investment in new capacity

Capacity Market: Winter 2017-18 is the first delivery period of the Capacity Market agreements. Further auctions are planned to take place annually. The Department expects the Capacity Market to support investments in new gas power plants and other flexible capacity, but so far relatively few agreements have been for new capacity.

New nuclear power: The Department agreed a deal to support Hinkley Point C in September 2016. Construction of the power station will last until the mid-2020s. The government plans to negotiate deals to support two further power stations, Wylfa and Moorside.

Incorporating intermittent generation: Network operators need to invest in the transmission and distribution network to accommodate increasing proportions of electricity coming from intermittent renewables, such as wind and solar.

Affordability of supply

Improving competition among suppliers and strengthening consumers' market position

New cost control mechanism: The government has committed to replacing the Levy Control Framework, a tool to control the cost of levy-funded policies. This should address the Framework's weaknesses around forecasting and supporting investor confidence.

Domestic energy efficiency: After the closure of the Green Deal scheme to new applications and the new focus of the Energy Company Obligation on fuel poverty, the UK still has no programme to support domestic energy efficiency for households that are able to pay for their own measures.

Smart meters roll-out: The government wants smart gas and electricity meters installed in all homes and businesses by 2020. The main installation stage began in 2016. There is no legal obligation to have one.

Decarbonisation

Setting out how the UK will meet its targets, in line with international commitments and the Industrial Strategy

Carbon price: The coalition government froze the price of carbon, which is the cost energy generators pay for emitting carbon dioxide, until 2020. It is currently unclear at what level the price will be set next. Increasing the carbon price would reduce the commercial viability of pollution-generating technologies to support decarbonisation objectives.

Cross-government coordination: The Department is responsible for ensuring cross-government action on meeting decarbonisation targets. Success will rely on its collaboration with a number of other government departments (for example, Transport, Communities and Local Government), each of which has its own priorities.

Managing the energy legacy safely and responsibly

How is it delivered?

BEIS is responsible for managing the UK's energy legacy – the long-term impacts of both past and current generation of energy – safely and responsibly. The main focus of this work is decommissioning nuclear processing facilities in Sellafield and retired nuclear reactors and research sites.

The Nuclear Decommissioning Authority (NDA), a non-departmental body sponsored by BEIS, is responsible for managing and decommissioning 17 nuclear reactors and research sites. NDA does this through a number of subsidiaries, such as site licence companies (SLCs).

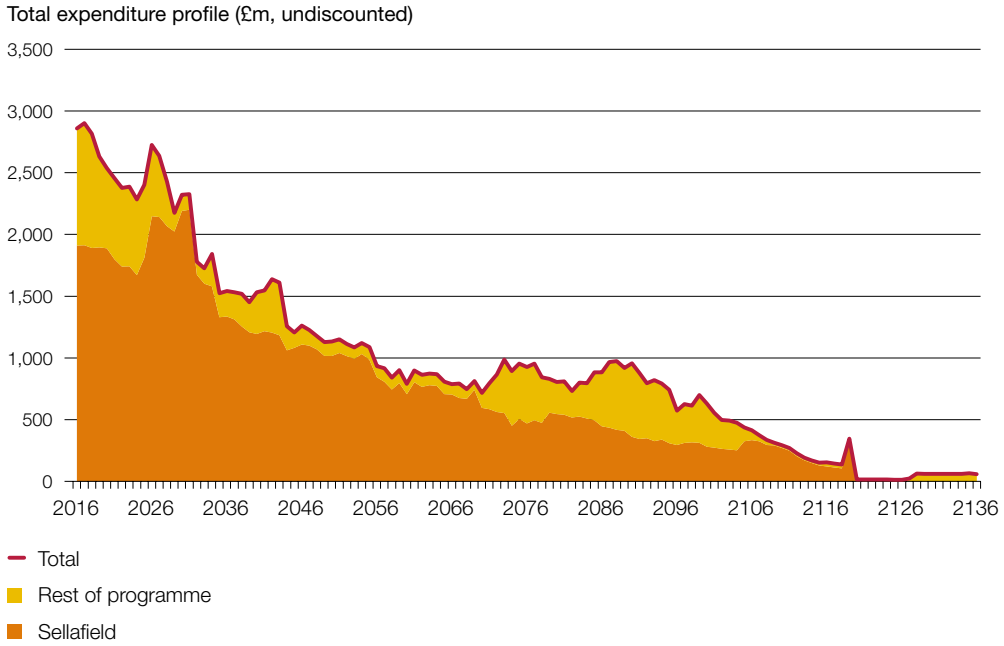
Dealing with the nuclear legacy sites currently costs around £3 billion annually, with total forecast costs of around £120 billion over the next 100 years.

BEIS is also responsible for development of a geological disposal facility for higher-level waste from all the UK's nuclear legacy sites. It is in the process of identifying a suitable site for the facility, which is expected to be active around 2040.

As well as nuclear power, BEIS has responsibility for managing the legacy impacts of the fossil fuel industry. This includes environmental impacts and public safety issues associated with both mining and energy generation.

Estimated future cost profile of nuclear decommissioning

The cost of decommissioning is likely to decline slowly over the next 100 years, from a starting point of around £3 billion per year. Most of the cost relates to Sellafield



Source: Nuclear Decommissioning Authority

In your area

The NDA manages 17 decommissioning sites containing nuclear waste and contaminated buildings.

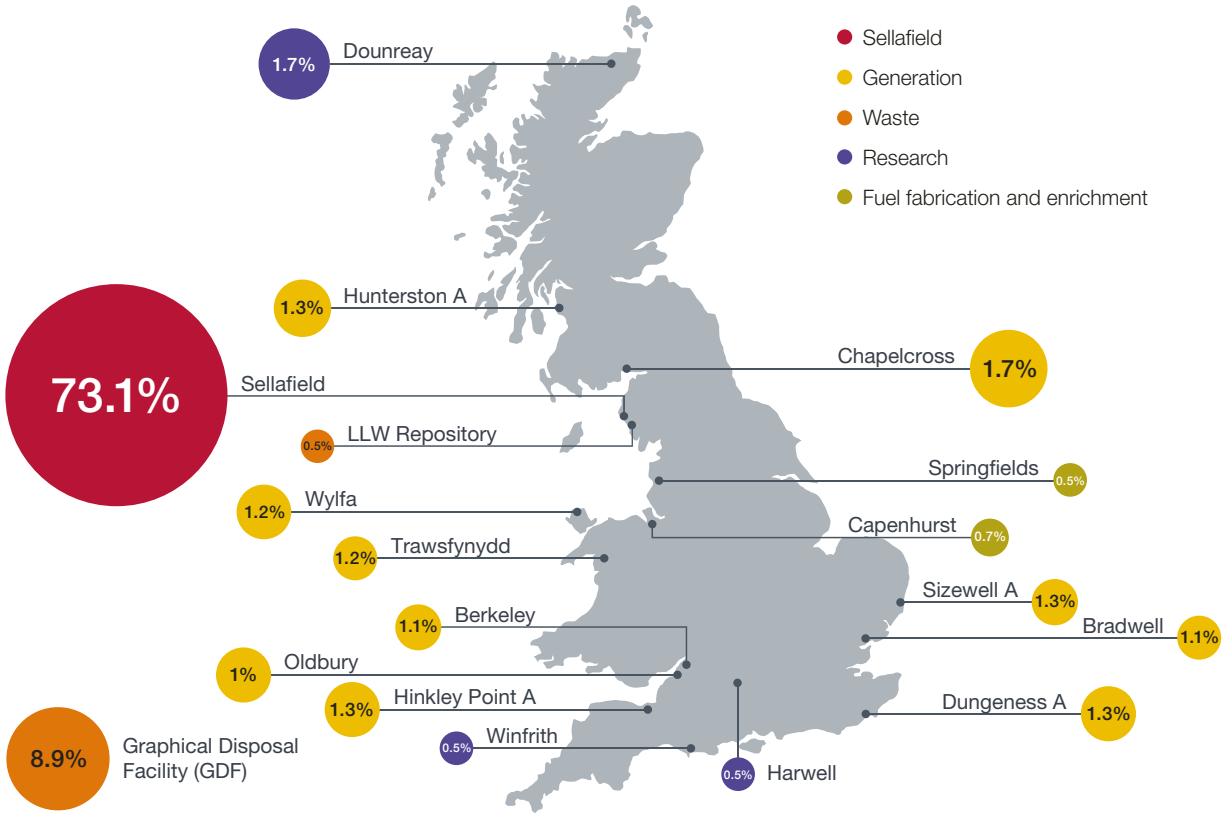
By far the largest site in terms of size and cost is Sellafield in Cumbria, which accounts for nearly three-quarters of the NDA's expenditure (£2 billion annually). Sellafield is also the most hazardous nuclear site, where nuclear waste and spent fuel is held in ageing facilities in urgent need of remediation.

Precise costs for decommissioning Sellafield are not available, due to the unknown quantity and type of waste in the legacy facilities and the long timescales involved. The NDA's estimate of decommissioning costs almost doubled from 2010 to 2015 and remains uncertain.

Much of the NDA estate requires constant management and security protection. Specific challenges include the lack of a facility for long-term disposal of high-hazard nuclear waste, and security risks associated with a stockpile of separated plutonium, which is expected to be around 140 tonnes at the cessation of nuclear reprocessing in around 2020.

The Nuclear Decommissioning Authority's sites and their proportion of its provision to cover decommissioning costs

The NDA manages 17 sites. Sellafield is by far the largest in terms of cost. It is yet to identify a site for a geological disposal facility to store spent nuclear fuel



Source: www.gov.uk/government/publications/nuclear-provision-explaining-the-cost-of-cleaning-up-britains-nuclear-legacy/nuclear-provision-explaining-the-cost-of-cleaning-up-britains-nuclear-legacy

Recent and planned developments

Sellafield

In April 2016, the Site Licence Company for Sellafield, the largest site on the NDA's estate, became a wholly owned subsidiary of the NDA.

This represented a significant change from the previous contracting model for the site, which involved the NDA contracting with a private sector consortium to provide business leadership of the Site Licence Company and take responsibility for delivering the decommissioning programme for Sellafield at a site level. During this time, estimated costs of major projects escalated, and little concrete progress was made in decommissioning the site's most hazardous facilities. The NDA ultimately decided that the uncertainty around the scope of work required on the site meant it could not successfully transfer performance risk to the private sector at a site level. Therefore it decided to take direct ownership of the site.

Since becoming a subsidiary of the NDA, Sellafield Ltd has appointed a new CEO and Board members, and begun a change programme aimed at transforming the business. A number of important milestones have been reached in remediating the most hazardous facilities on the site. Sellafield and the NDA have accepted a cost-saving target for the site of £1.4 billion by 2020. It will require significant improvements in productivity if Sellafield is to avoid deferring any decommissioning work.

The NAO plans to write about these issues in an upcoming report on the Nuclear Decommissioning Authority, for publication in 2018.

The NDA's Magnox contract

In March 2017, government announced that the NDA had decided to terminate a £6 billion contract for decommissioning 12 nuclear sites on its estate (the Magnox contract). The NDA decided to terminate the contract because it had become clear that there was a significant mismatch between the work required on the sites and the scope of work put out to competition.

In a separate decision, government also settled legal claims from two companies who alleged the procurement exercise for the contract was faulty. In total, the settlements were for nearly £100 million.

The Energy Secretary has commissioned an independent inquiry into the causes of the procurement failure and the issues the contract encountered which led to its termination. This inquiry is expected to report its interim findings in autumn 2017.

Separately to the inquiry, the NAO is producing a short factual briefing on Magnox for publication in September 2017. The briefing will provide an overview of the issues the contract encountered, from the initiation of the procurement in 2012 up to the decision to terminate the contract. The briefing will also cover the governance and assurance arrangements for the contract, and the costs to the taxpayer of the contract's failure.

The contract will be terminated on two years' notice, coming to an end in September 2019. The NDA has not yet decided what it will do with the Magnox sites beyond that point. It is currently developing options for a replacement contracting structure for the sites. The chosen option will be subject to approval by the Department and HM Treasury.

What are the things to look out for?

Exit from Euratom (the European atomic energy community)

The UK government announced its intention to leave Euratom in explanatory notes to the European Union (Notification of Withdrawal) Act 2017. In order to continue international collaboration and trade in the nuclear energy industry, including nuclear decommissioning, the UK will need to introduce a domestic system of safeguards against civil nuclear material being used in nuclear weapons. The UK will need new legislation, new domestic systems and a new agreement with the International Atomic Energy Association.

Magnox replacement contract

In March 2017 the government announced it would terminate its contract for decommissioning 12 'Magnox' nuclear sites nine years early, in 2019. A replacement contract will need to be introduced in order to continue decommissioning the sites. Whether government opts for a competitive procurement exercise or brings the management of the sites in-house (as it has done for Sellafield), work to prepare for the next phase of the Magnox decommissioning will be a significant undertaking.

Dounreay exotic fuels programme

The government is moving various nuclear materials stored at Dounreay in Scotland to Sellafield. The materials must be kept secure for national security reasons. The government has sought to accelerate the timescale for the transfer of this material, aiming to complete the move by 2017 or 2018, but the Department and the NDA have acknowledged that there is a risk that timescales will slip beyond this.

Efficiency savings at Sellafield

Sellafield Ltd became a wholly owned subsidiary of the NDA in 2016. It is undergoing a programme of transformation with the aim of realising efficiency savings of £1.4 billion by 2020. So far, efficiency savings have exceeded targets, but the task will become harder once early gains have been realised.

Appendices

Appendix One – Staff and pay 2016-17

Appendix Two – Staff attitude and engagement

Appendix Three – Recent NAO reports

Appendix Four – Sponsored public bodies

Appendix One – Staff and pay 2016-17

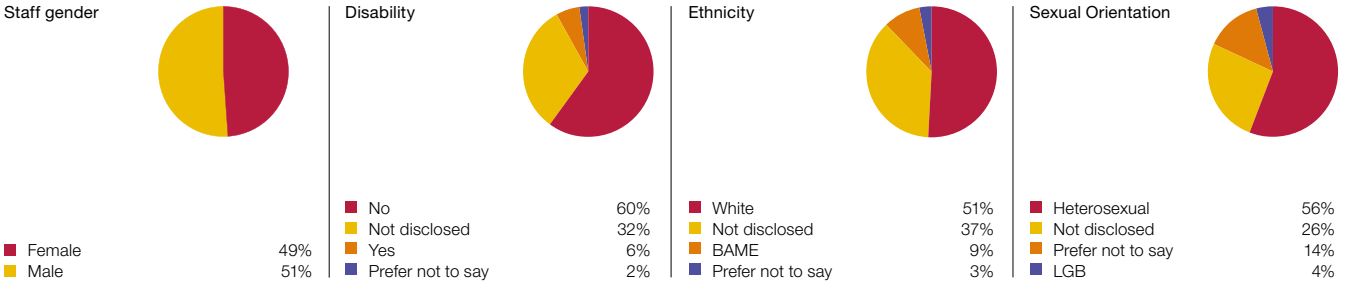
The departmental group had just over 19,000 full-time equivalent staff in 2016-17, of which more than 75% were in non-departmental public bodies (NDPBs) and other bodies. Around 9% of staff self-disclosed as black and minority ethnic (BAME), and around 6% stated that they had a disability.

The civil service has a shortage of the digital, project delivery and commercial skills that it needs to deliver planned departmental transformation, major projects and preparations to exit the European Union. It is working to improve workforce planning and to build specialist capability through cross-government functions, but this will take time to take effect.

Given the scale of its EU-exit responsibilities, BEIS is recruiting up to 500 new staff in 2017-18, as well as filling newly created EU-exit roles internally.

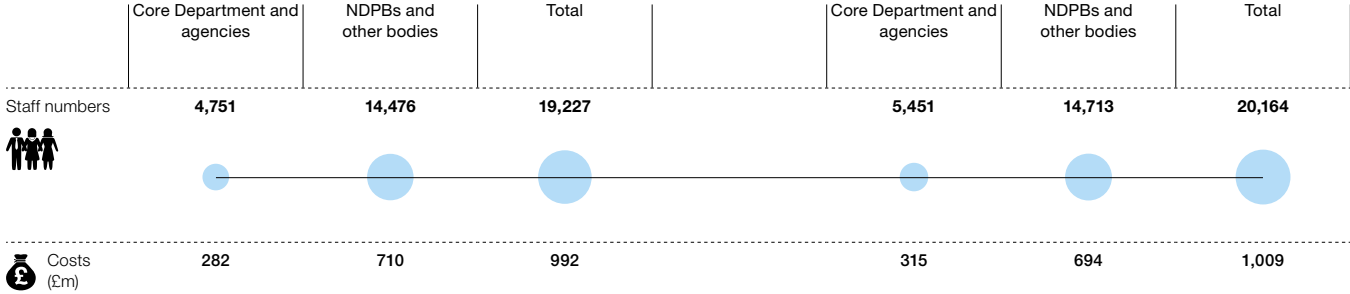
Zoom Out Zoom In +

Workforce in Department 2016-17



Staff breakdown 2016-17 (full-time equivalent)

Staff breakdown 2015-16 restated (full-time equivalent)



Pay multiples

	2016-17	2015-16 (restated)
Ratio	4.92	4.73
Band of highest paid director's total remuneration (£)	180,000–185,000	175,000–180,000
Median total remuneration (£)	37,092	37,502

Source: Department for Business, Energy & Industrial Strategy, *Annual Report and Accounts 2016-17*

Appendix Two – Staff attitudes and engagement

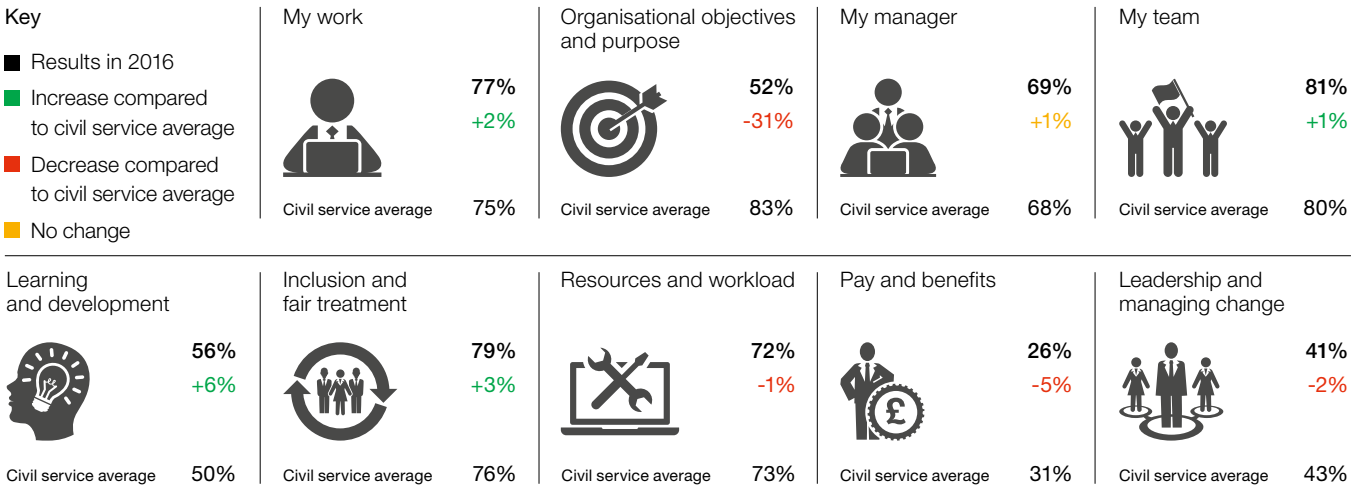
The government has conducted its **Civil Service People Survey** annually for the past eight years. The result of the most recent survey was published in November 2016. The BEIS response rate was 86%, compared with the civil service average of 65%.

The Department scored an engagement index of 54%, a drop on the previous year's results for BIS and DECC, which were 56% and 59% respectively. The drop in engagement was driven by lower scores on the BEIS themes: 'organisational objectives and purpose' and 'leadership and managing change'. The survey also showed that dissatisfaction with pay and benefits had persisted from both predecessor departments.

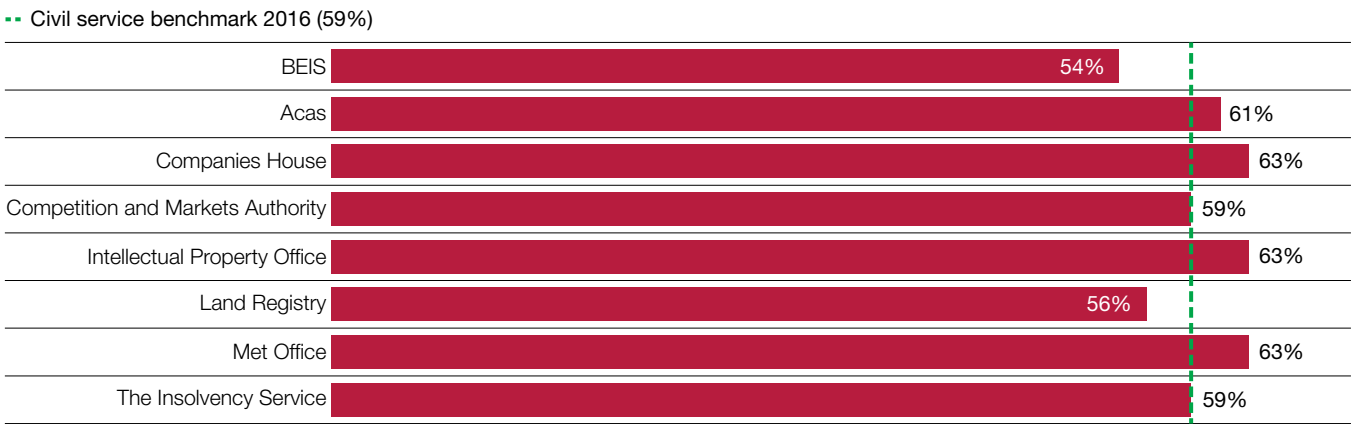
The indicator for 'inclusion and fair treatment' was 79%, which was three percentage points higher than the performance benchmark for the civil service. The indicator for 'learning and development' was 56%, which was six percentage points above the benchmark.

The Department used monthly 'pulse surveys' to track levels of engagement through the process of merging DECC and BIS into a single unified department. There was an increase across all measures between the baseline survey in October 2016 and the end of March 2017 – for example, staff understanding how their work contributed to Department objectives increased by 26 percentage points to 72%.

Attitudes of staff in 2016 compared with civil service average – Department for Business, Energy & Industrial Strategy



Engagement index 2016



Sources: Civil Service People Survey 2016 and 2015

Appendix Three – Recent NAO reports

Title	Publication date	Description
Hinkley Point C	23 June 2017	Report into the building of a new nuclear power station, noting that the economic case had become increasingly marginal since the deal was concluded, and other options for doing the deal had not been sufficiently considered.
Vulnerable Consumers in Regulated Industries	31 March 2017	Report considering whether regulators in the water, energy, telecommunications and financial services sectors could do more to support the increasing number of vulnerable consumers.
Carbon Capture and Storage: the second competition for government support	20 January 2017	Report examining the failure of the second competition launched by the government for companies to obtain support for developing Carbon Capture and Storage technologies.
Protecting consumers from scams, unfair trading and unsafe goods	15 December 2016	The report examines the system protecting consumers from scams, unfair trading and unsafe goods. BEIS has made progress since our 2011 review, but needs to do more, particularly in the context of the growth of e-commerce.
Controlling the consumer-funded costs of energy policies: The Levy Control Framework	18 October 2016	Report looking at government attempts to keep energy prices low as one-third of its energy 'trilemma' and whether they have succeeded.
Delivering value through the apprenticeships programme	6 September 2016	Report studying the government's flagship apprenticeships programme and concluding that the government has not set out how the programme will include productivity or what mix of apprenticeships are needed.
Nuclear power in the UK	13 July 2016	This report looks at some of the main electricity system challenges the UK faces in the next two decades, and the aims and responsibilities of the Department of Energy & Climate Change.
The Business Impact Target: cutting the cost of regulation	29 June 2016	Report into government plans for cutting business regulations, which shows that although the government is likely to hit its target it will not reduce the actual cost of regulation to business.
Green Deal and Energy Company Obligation Investigation into the Department of Energy & Climate Change's loans to the Green Deal Finance Company	14 April 2016	Value-for-money report into the Green Deal and the Energy Company Obligation, two complementary schemes to encourage households to install energy efficiency measures. Investigation into the Department's loans to the Green Deal Finance Company. The Department lost £25 million (out of a £48.5 million loan) because the take-up of Green Deal finance plans was below expectations.

Appendix Four – Sponsored public bodies

Links to the website of sponsored bodies/arm's-length bodies, executive agencies and executive non-departmental public bodies

Department for Business, Energy & Industrial Strategy homepage

Non-ministerial department

Competition and Markets Authority

HM Land Registry

Ordnance Survey

Executive agency

Insolvency Service

Intellectual Property Office

Met Office

National Measurement and Regulation Office

UK Space Agency

Advisory non-departmental public body

Committee on Fuel Poverty

Committee on Radioactive Waste Management

Council for Science and Technology

Industrial Development Advisory Board

Insolvency Rules Committee

Land Registration Rule Committee

Low Pay Commission

Nuclear Liabilities Financing Assurance Board

Office of Manpower Economics

Regulatory Policy Committee

Executive non-departmental public bodies

Advisory, Conciliation and Arbitration Service

Arts and Humanities Research Council

Biotechnology and Biological Sciences Research Council

British Hallmarking Council

Civil Nuclear Police Authority

Coal Authority

Committee on Climate Change

Competition Service

Economic and Social Research Council

Engineering and Physical Sciences Research Council

Innovate UK

Medical Research Council

Natural Environment Research Council

Nuclear Decommissioning Authority

Science and Technology Facilities Council

UK Atomic Energy Authority

Tribunal non-departmental public body

Central Arbitration Committee

Competition Appeal Tribunal

Copyright Tribunal

Insolvency Practitioners Tribunal

Other

British Business Bank

Certification Officer

Companies House

Government Office for Science

Green Investment Bank (until August 2017), and UK Green Infrastructure Platform (from August 2017)

Groceries Code Adjudicator

Independent Complaints Reviewer

Low Carbon Contracts Company

Midlands Engine Investments Limited

Northern Powerhouse Investments Limited

Office of the Regulator of Community Interest Companies

Oil and Gas Authority

Post Office Limited

Pubs Code Adjudicator

UK Shared Business Services Limited