



National Audit Office

OVERVIEW

Department for Energy Security & Net Zero

Departmental Overview 2022-23

We are the UK's independent public spending watchdog

February 2024

What this guide is about

This guide has been produced to support the Energy Security and Net Zero Committee in its examination of the Department for Energy Security & Net Zero's (DESNZ's) remit, plans and budget. It summarises the key information and insights that can be gained from our examinations of DESNZ and its predecessor Department (the Department for Business, Energy & Industrial Strategy) and announcements in the [2023 Autumn Statement](#).

The guide includes:

- ➔ overview and how DESNZ is structured;
- ➔ key themes from our audit work; and
- ➔ spending and financial management;
- ➔ major programmes.

How we have prepared this guide

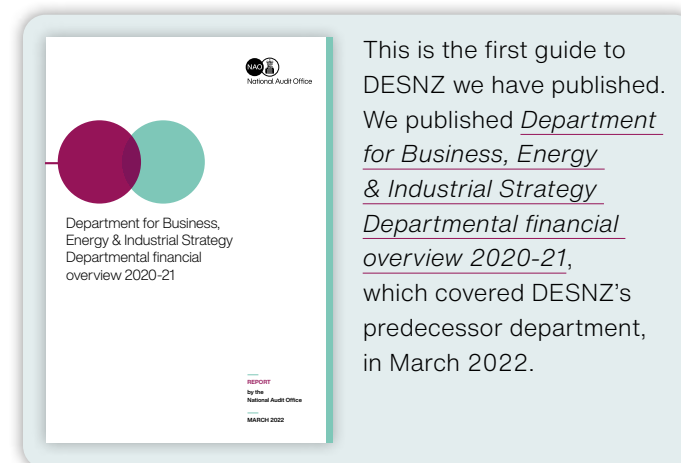
The information in this guide draws on the findings and recommendations from our financial audit and value-for-money programme of work, and from publicly available sources.

We have cited these sources throughout the guide to enable readers to seek further information if required. Where analysis has been taken directly from our value-for-money or other reports, details of our audit approach can be found in the Appendix of each report, including the evaluative criteria and the evidence base used.

Other analysis in the guide has been directly drawn from publicly available data and includes the relevant source as well as any appropriate notes to help the reader understand our analysis.

Other relevant publications

More information about our work on energy security and net zero, as well as information about our other recent and upcoming reports, can be found on the NAO website.



More information about central government accounting and reporting

You may also be interested in our interactive guide to [Good practice in annual reporting](#) (February 2023) which sets out good-practice principles for annual reporting, and provides illustrative examples taken from public sector organisations who are leading the way in this area.

Departmental Overview 2022-23

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About the National Audit Office

The National Audit Office (NAO) is the UK's independent public spending watchdog. We scrutinise public spending for Parliament and are independent of government and the civil service. We help Parliament hold government to account and we use our insights to help people who manage and govern public bodies improve public services.

The Comptroller and Auditor General (C&AG), Gareth Davies, is an Officer of the House of Commons and leads the NAO. We audit the financial accounts of departments and other public bodies. We also examine and report on the value for money of how public money has been spent.

In 2022, the NAO's work led to a positive financial impact through reduced costs, improved service delivery, or other benefits to citizens, of £572 million.

If you would like to know more about the NAO's work on science, innovation and technology, or are interested in the NAO's work and support for Parliament more widely, please contact:

Parliament@nao.org.uk
020 7798 7665



Part One • Overview

About the Department for Energy Security & Net Zero (DESNZ)

The Department for Energy Security & Net Zero (DESNZ) was formed in February 2023, following machinery of government changes.

DESNZ is focused on the energy portfolio from the former Department for Business, Energy & Industrial Strategy (BEIS). The DESNZ group includes 14 public bodies, of which by far the largest in terms of expenditure is the Nuclear Decommissioning Authority.

DESNZ aims to secure long-term energy supply, bringing down bills and halving inflation. It is responsible for:

- delivering security of energy supply;
- ensuring properly functioning energy markets;
- encouraging greater energy efficiency; and
- seizing the opportunities of net zero to lead the world in new green industries.

For 2023, DESNZ had six priorities:

- 1** Ensure security of energy supply this winter, next winter and in the longer term – bringing down energy bills and reducing inflation.
- 2** Ensure the UK is on track to meet its legally binding net zero commitments and support economic growth by significantly speeding up delivery of network infrastructure and domestic energy production.
- 3** Improve the energy efficiency of UK homes, businesses and public sector buildings to meet the 15% demand reduction ambition.
- 4** Deliver current schemes to support energy consumers with their bills and develop options for long-term reform to improve how the electricity market works for families and businesses.
- 5** Seize the economic benefits of net zero, including the jobs and growth created through investment in new green industries.
- 6** Pass the Energy Bill to support the emerging carbon capture, utilisation and storage (CCUS) and hydrogen sectors; to update the governance of the energy system; and to reduce the time taken to consent offshore wind.

DESNZ's **longer-term objectives** include:

- 1 ensuring properly functioning energy markets;
- 2 coordinating net zero objectives across government; and
- 3 bringing external delivery expertise to bear on its portfolio of major projects.

Part One • Overview

How DESNZ is structured

DESNZ is led by the Secretary of State for Energy Security and Net Zero, and the Permanent Secretary.

DESNZ is currently organised into four Director General-led business units supported by corporate service functions. The Permanent Secretary (Jeremy Pocklington), Second Permanent Secretary (Clive Maxwell) and Chief Scientific Adviser (Prof. Paul Monks) are also members of DESNZ's leadership team.

Energy Markets and Supply

Jonathan Mills

Responsible for the following areas:

- energy supply
- energy markets
- energy affordability
- strategy
- analysis

Energy Infrastructure

Ashley Ibbett

Responsible for the following areas:

- energy systems and networks
- renewable electricity
- carbon capture, usage and storage (CCUS)
- energy development
- energy security
- offshore oil and gas regulation

Net Zero Buildings and Industry

Ben Rimmington

Responsible for the following areas:

- heat and business energy
- home and local energy
- smart metering implementation

Net Zero, Nuclear and International

Lee McDonough

Responsible for the following areas:

- net zero strategy
- international net zero: climate finance, energy and trade
- science and innovation for climate and energy
- nuclear protection, development and decommissioning

Source: Department for Energy Security & Net Zero



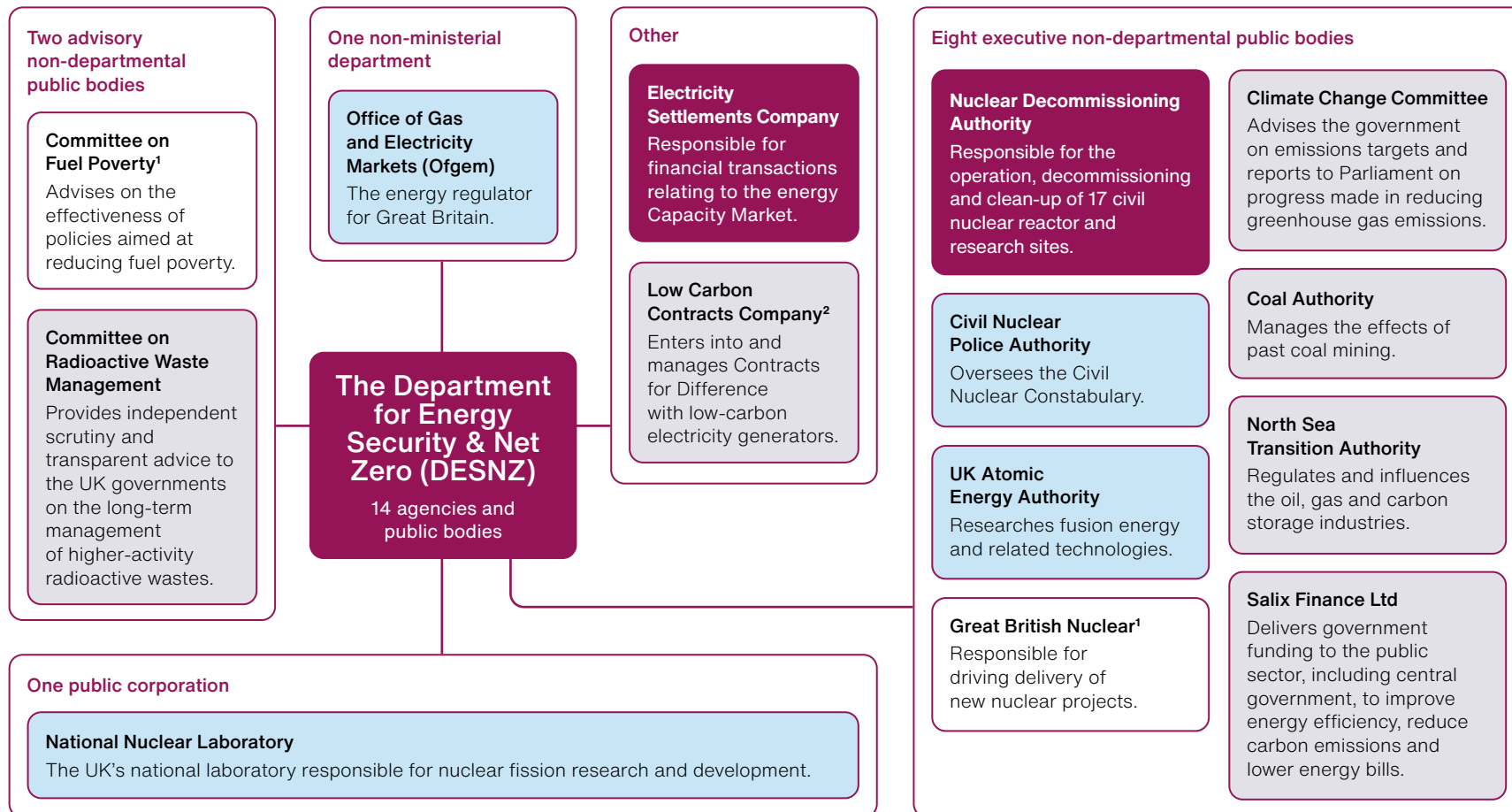
Part One • Overview

The DESNZ group

The Department for Energy Security & Net Zero (DESNZ) works with 14 agencies and public bodies to deliver its objectives.

DESNZ's arm's-length bodies have a wide range of policy and operational responsibilities. They are grouped here by their type and annual operating expenditure.

The Department for Energy Security & Net Zero's agencies and public bodies



● Operational expenditure >£500mn ◻ Operational expenditure between £100mn and £500mn ◻ Operational expenditure <£100mn

Notes

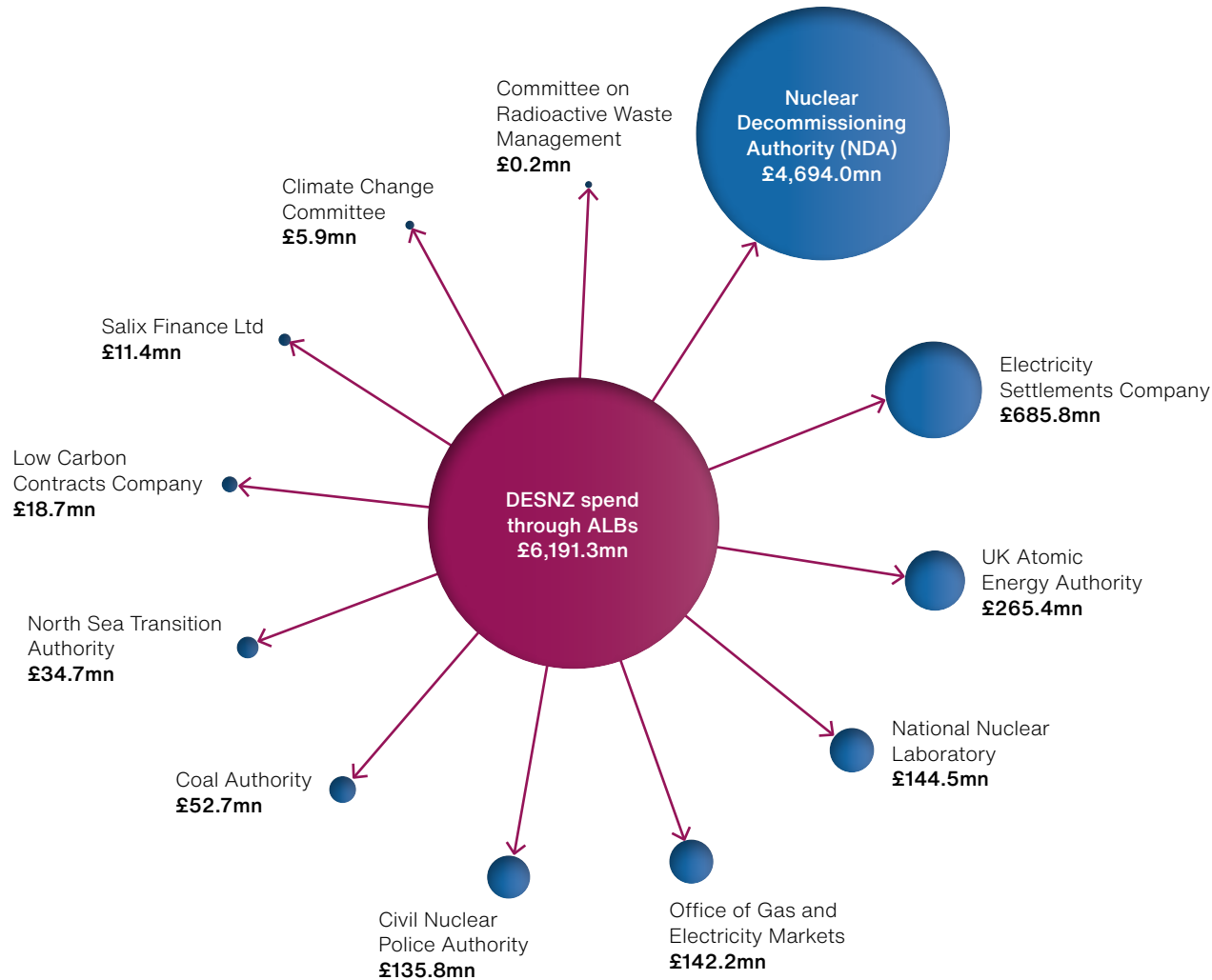
- Great British Nuclear and the Committee on Fuel Poverty have not published an annual report.
- Low Carbon Contracts Company figures do not include the changes in value in the Contracts for Difference, which can be large. In 2022-23 these increased by £13.5 billion. In 2021-22 they fell by £10.3 billion.

Source: National Audit Office analysis of DESNZ agencies' and public bodies' published annual reports and 'About us' webpages

Part One • Overview

Spending by DESNZ arm's-length bodies (ALBs) in 2022-23

The DESNZ ALBs spent £6.2 billion in 2022-23



Notes

- 1 This figure shows 2022-23 operating expenditure for the DESNZ group's ALBs, as reported in their published annual reports. It excludes finance costs and movements in the valuation of provisions and financial instruments.
- 2 The NDA expenditure figure shown here includes £793 million of accounting adjustments relating to non-cash items and internal transactions.
- 3 Figures have been rounded to the nearest £100,000 for clarity (other than the NDA, which does not publish its annual spending at this level of granularity due to its size).
- 4 Figures for two ALBs (Great British Nuclear and the Committee on Fuel Poverty) are not shown, as they have not published a 2022-23 annual report.
- 5 Spending by the core department is not shown. DESNZ was created in February 2023 and it is not possible to separate Department for Business, Energy & Industrial Strategy (its predecessor department) 2022-23 spending in line with the split of its responsibilities between three new departments.

Part One • Overview

Recent NAO work relating to DESNZ

Date	Report title	Scope of the report	See this page for more information
January 2024	● The government's support for biomass	Examines the current role of biomass in generating heat and power, the government schemes currently in place and the main features of DESNZ's Biomass Strategy.	Page 16
September 2023	● Approaches to achieving net zero across the UK	A joint piece of work between the public audit offices of the four UK nations. It sets out the UK and devolved governments' legislation, policy, strategy, governance and monitoring arrangements relevant to achieving net zero greenhouse gas emissions.	Pages 16 and 17
June 2023	● Update on the rollout of smart meters	Assesses BEIS/DESNZ's progress in leading the smart meter rollout since our previous report in 2018, and how well it is set up for the remainder of the rollout and the subsequent transition to industry-led governance.	Page 14
May 2023	● Support for innovation to deliver net zero	Examines whether the government is set up to deliver value for money from its approach to investment in research and innovation to deliver net zero in the UK.	Page 16
March 2023	● Investigation into Bulb Energy	Sets out the facts about the process by which Bulb Energy Limited was taken into a Special Administration Regime in November 2021, before its customers were transferred to a new provider in December 2022.	Page 15
	● Decarbonising the power sector	Provides an early assessment of the risks DESNZ needs to manage as it develops a plan to achieve its ambition of decarbonising power by 2035.	Page 14
February 2023	● Energy bills support	Provides the basis for early Parliamentary scrutiny of how BEIS has designed and implemented the energy bills support and the potential cost.	Page 15 and 18
June 2022	● The energy supplier market	Sets out the facts regarding the recent exit of energy suppliers, and evaluates Ofgem and BEIS's roles in the events leading to the exits and how well they handled them.	Page 15
	● Measuring and reporting public sector greenhouse gas emissions	Examines the extent to which the government measures and reports public sector emissions in line with its ambition for the public sector to be a leader in decarbonising its activities.	-
January 2022	● The decommissioning of the AGR power stations	Examines whether the outcome of BEIS's negotiations with EDF Energy and subsequent preparations for defueling and deconstruction are likely to lead to better value for money when decommissioning the Advanced Gas-cooled Reactor fleet.	Page 11

Subject of report:

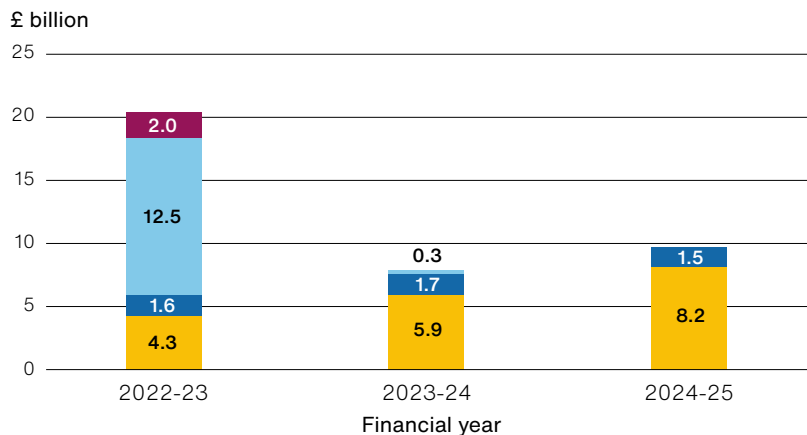
- Energy sector (consumer focus)
- Energy sector (generation focus)
- Wider net-zero arrangements

Part Two • Spending and financial management

DESNZ's budget and recent announcements

The Department for Energy Security & Net Zero's (DESNZ's) departmental expenditure limit (DEL), 2022-23 to 2024-25

In 2023 HM Treasury announced plans for DESNZ to spend £38 billion between 2022-23 and 2024-25



- Energy support funding in capital DEL
- Energy support funding in resource DEL
- Resource DEL (excluding energy support funding)
- Capital DEL (excluding energy support funding)

Notes

- 1 Departmental Expenditure Limits (DEL) are budgetary restrictions set by HM Treasury (usually in Spending Reviews) and voted on by Parliament each year. They are split into capital and resource funding. Resource DEL covers current expenditure (including staff and procurement costs, subsidies and some grants). Capital DEL covers spending on new investments (including fixed assets) and financial transactions.
- 2 2022-23 figures reflect outturn in HM Treasury's Public Expenditure Statistical Analysis, adjusted for provisional estimates of energy support spending.
- 3 The energy support funding shown reflects the cost of the Energy Bills Support Scheme, the Alternative Fuel Payment (both of which were one-off payments) and the Bulb Special Administration Scheme. It does not include the Energy Price Guarantee and Energy Bill Relief Scheme, which capped the unit cost of electricity charged to users.
- 4 All figures exclude depreciation.

Source: National Audit Office analysis of HM Treasury, *Autumn Statement 2023*, CP 977, November 2023

Autumn Statement 2023

Significant announcements in the Autumn Statement 2023 include:

£300 million

Energy efficiency tax incentives:

A new, six-year Climate Change Agreement scheme from 2025 aims to incentivise investment in energy efficiency and decarbonisation. The government estimates that companies in energy-intensive industries will claim approximately £300 million per annum in tax relief. Additionally, more energy-saving materials will be eligible for VAT relief from February 2024.

2027

Improvements to the UK's Emissions Trading Scheme:

The government announced that it intends to respond to its consultation on measures to limit 'carbon leakage'. It subsequently announced that a carbon border adjustment mechanism (a charge levied on imports where the country of origin sets lower carbon prices than the UK) would be introduced in some sectors by 2027.

£960 million

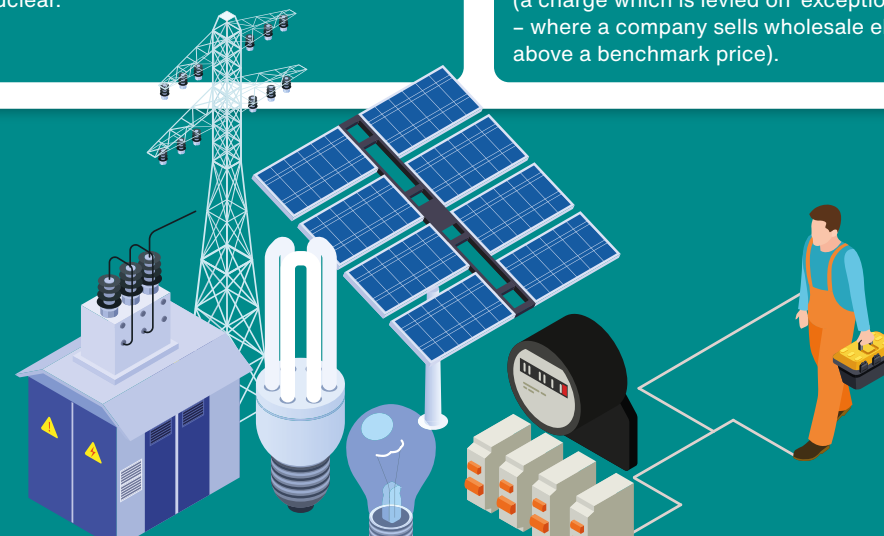
Green Industries Growth Accelerator:

To support investments in manufacturing capabilities for clean energy sectors including carbon capture, utilisation and storage (CCUS), hydrogen, offshore wind, electricity networks and nuclear.

Investment

Renewable electricity:

To support continued investment in the UK's renewable generation capacity, the government will legislate for an exemption for new generating stations from the Electricity Generator Levy (a charge which is levied on 'exceptional receipts' - where a company sells wholesale electricity above a benchmark price).



Part Two • Spending and financial management

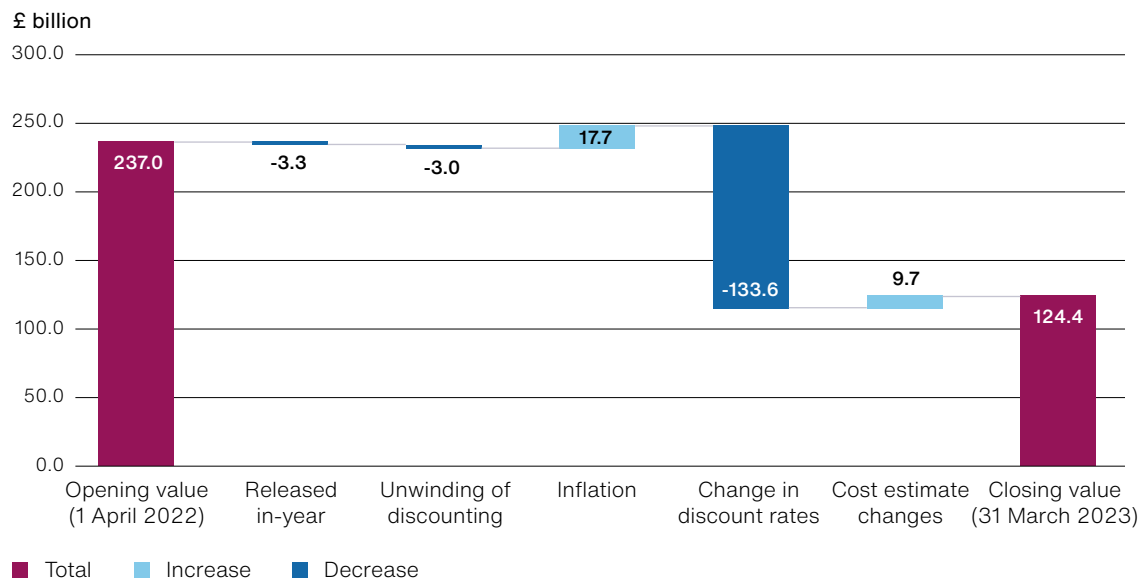
Nuclear decommissioning

The Nuclear Decommissioning Authority (NDA), DESNZ’s largest arm’s-length body, is responsible for clearing up the UK’s legacy nuclear sites (which it expects will take until 2137).

The forecast cost of decommissioning nuclear sites is still highly uncertain (particularly the costs of decommissioning Sellafield and constructing a Geological Disposal Facility for long-term waste storage). The provision can also be significantly affected by changes in assumptions – particularly the discount rate (which is used to express future costs in terms of their ‘present value’).

The provision was valued at £124.4 billion as at 31 March 2023. The Magnox sites (including Dounreay) account for £9.1 billion of the £9.7 billion cost estimate change in 2022-23.

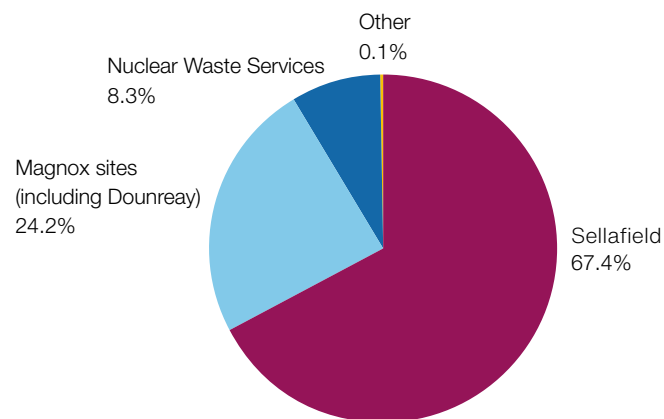
Movement in the value of the Nuclear Decommissioning Authority (NDA) nuclear provision 2022-23 (£bn)



Source: National Audit Office analysis of the *Nuclear Decommissioning Authority's Annual Report and Accounts 2022-23*

Breakdown of the Nuclear Decommissioning Authority’s (NDA’s) nuclear provision as at 31 March 2023

The Sellafield site in Cumbria makes up 67% of the forecast cost of decommissioning existing sites



Notes

- 1 The information shown reflects the discounted value of the provision, as at 31 March 2023 as a proportion of the total provision.
- 2 Sellafield manages legacy sites and stores spent fuel on an interim basis. It previously reprocessed waste, and continues to treat and manage waste.
- 3 The Magnox sites are closed ‘first generation’ nuclear power stations, located in England, Scotland and Wales. Dounreay is a closed reactor research site which is being decommissioned by the same part of NDA (now known as Nuclear Restoration Services).
- 4 Nuclear Waste Services operates a repository for low-level waste and is developing a Geological Disposal Facility for permanent disposal of waste currently held at other sites. NDA’s forecasts assume this will be available by 2050.

Source: National Audit Office analysis of the *Nuclear Decommissioning Authority's Annual Report and Accounts 2022-23*

Managing the cost of nuclear liabilities

Nuclear decommissioning poses particular challenges for effective financial management due to the high cost and long-term nature of the liabilities (which do not include the three AGR stations that have already closed).

Decommissioning further nuclear power stations

Seven of the UK's eight nuclear power stations are expected to close by 2028. These seven sites will be transferred to the Nuclear Decommissioning Authority (NDA) after they have been defueled, with spent fuel transferred to Sellafield. The Nuclear Liabilities Fund (NLF), which is underwritten by the government, was set up to meet the costs of defuelling and decommissioning.

Our 2022 report *The decommissioning of the AGR nuclear power stations* found:

- The current best estimate is that the eight existing sites will cost £23.5 billion to defuel and decommission (these costs are not currently included in the NDA's nuclear provision, which is shown on page 10).
- The forecast cost (in real terms) had risen by 87% between 2004-05 and 2020-21, and exceeded the value of the Nuclear Liabilities Fund (which was £14.8 billion – even after the government made a £5.1 billion capital contribution in 2020).
- Costs could rise further, particularly if defueling takes longer than planned. Since the return on the Fund's investments had fallen well short of its target in each of the seven years between 2014-15 and 2020-21, there is a risk that further taxpayer contributions may be required.

The NDA also recognises it faces financial management challenges

The NDA's board warned in September that there was an increased risk that it would face funding shortfalls caused by inflation and anticipated wider pressures on government spending over both the current spending review period (which runs from April 2022 to March 2025) and the next.¹ It expects its revenue will fall as AGRs close (it currently receives commercial revenues from the owners of the AGR fleet, to deal with spent fuel). These pressures could reduce long-term value for money if funding constraints prevent it from decommissioning sites in the optimal way.

The board also highlighted the increased likelihood of supply chain failure (due to rising costs), and an increased risk that the Geological Disposal Facility programme (to build a site able to store waste deep underground for thousands of years) would be delayed beyond the assumed opening date of 2050. This would mean the NDA would be unable to manage radioactive waste cost-effectively.

¹ *Nuclear Decommissioning Authority Annual report and Accounts 2022/23*, Pages 87-91.

Part Two • Spending and financial management

Key audit matters – the Department for Business, Energy & Industrial Strategy (BEIS) 2022-23 audit

Key audit matters are those which the Comptroller and Auditor General (C&AG) considered to be of most significance (including the areas of greater risk of material misstatements). They had the greatest effect on the overall audit strategy, allocation of resources and direction of effort.

DESNZ came into being in February 2023 and has not yet produced a set of annual accounts. The annual report of its predecessor, the Department for Business, Energy & Industrial Strategy includes an extended auditor report (pages 166-177): an overview of the audit approach explaining the procedures carried out in response to risks. This work did not identify any material misstatements.

Areas of greater risk

Nuclear provisions

Nuclear provisions are inherently uncertain due to the need to estimate the cost of decommissioning facilities where both the condition of the facilities and their contents are uncertain over long timescales (up to 2137). See pages 10 and 11.

Contracts for Difference (CfDs)

CfDs are financial instruments designed to support investment in low-carbon energy generation by providing certainty of revenue. There is a high degree of estimation uncertainty because of the need to forecast generation volumes and wholesale prices into the 2030s (and the 2060s for the Hinkley Point C nuclear power station). The net liability at 31 March 2023 was £13.4 billion, a significant reduction from 31 March 2022 (£26.9 billion) because of updated assumptions.

Recognition and measurement of support to Bulb

BEIS made payments to the Bulb administrators until December 2022 to ensure continued supply of energy to Bulb's customers and to Octopus (the new owners) until March 2023. These are due to be repaid by September 2024. See page 15.

Recognition and measurement of the energy support schemes

BEIS rolled out several schemes in response to surging energy prices in 2022-23, and a further scheme (for business customers only) for 2023-24. The unique nature of the intervention required management to make judgments in determining the accounting policies that should be applied. The speed of rollout increased the risk of fraud and error: the schemes which support non-domestic customers are much more complex than those supporting domestic customers. See pages 15 and 18.

Observations following the audit

- The report drew attention to the disclosures BEIS made in the financial statements to the uncertainty around the estimate.
- If subsequent information or events alter the NDA's current assumptions, there could be significant changes to the liability.
- For the first time, there are CfDs with a positive fair value, which means DESNZ expects generators to pay back consumers as part of their contracts.
- As with the nuclear provisions, the report drew attention to the disclosures in the financial statements.
- There is a high level of subjectivity involved in selecting a suitable wholesale electricity price forecast.
- The fair value of the financial asset (the amount due to be repaid) and transactions during the year were accurate and appropriately valued.
- Adequate controls are in place to prevent and detect irregularity, including due to fraud.
- Accounting policy choices and disclosures fairly reflect the substance of the schemes.

Part Two • Spending and financial management

Key audit matters – the Department for Business, Energy & Industrial Strategy (BEIS) 2022-23 audit *continued*

Key audit matters are those which the Comptroller and Auditor General (C&AG) considered to be of most significance (including the areas of greater risk of material misstatements). They had the greatest effect on the overall audit strategy, allocation of resources and direction of effort.

DESNZ came into being in February 2023 and has not yet produced a set of annual accounts. The annual report of its predecessor, the Department for Business, Energy & Industrial Strategy includes an extended auditor report (pages 166-177): an overview of the audit approach explaining the procedures carried out in response to risks. This work did not identify any material

Areas of greater risk

Machinery of Government change

The government announced on 7 February 2023 that BEIS's functions would be split between three new departments, with immediate effect. At HM Treasury's direction, BEIS remained responsible for preparing financial statements for the year to 31 March 2023. This meant additional judgments about disclosures (including in the Remuneration Report), and the suitability of the 'going concern' basis were required.

Accounting for BEIS's investment in Sizewell C

During 2022-23, BEIS acquired 40.4% of the company building the Sizewell C nuclear power station. The 'asset under construction' for early development costs relating to the Sizewell C nuclear power station was valued at £839 million as at 31 March 2023. The acquisition of control of a private sector company is novel in central government accounting, which increases the risks around accuracy of consolidation and sufficiency of related disclosures.

Defined Benefit pension schemes

Eight pension schemes in the NDA group had, between them, liabilities of £4.5 billion and net assets of £5.4 billion, giving a net surplus of just over £900 million. This depends on actuarial valuations of the liability and estimates of the value of the assets – some of which are hard to value.

Observations following the audit

- The Remuneration Report's disclosures were properly prepared.
- The going concern basis continues to be appropriate because the new departments are expected to continue to provide the services previously provided by BEIS.
- No material misstatements or omissions from the disclosures presented in the financial statements were identified.
- The valuations provided by the scheme actuaries provided a reliable basis for estimating the retirement benefit obligation.
- Scheme asset values are materially accurate and the net asset position is an amount BEIS would reasonably be expected to recover.

Part Three • Key themes from our audit work

Modernising the energy system

The 2021 Net Zero Strategy set an ambitious target of decarbonising electricity generation by 2035, even as demand is forecast to increase by 40 to 60%. DESNZ sees smart meters as a critical feature of an efficient, decarbonised power system.

Decarbonising the power sector (March 2023)

The government estimates £280 billion to £400 billion of public and private sector investment in new generating capacity will be needed by 2037. Our report found that DESNZ does not have a delivery plan linking together different aspects of power sector decarbonisation. It needs a joined-up approach with a critical path to ensure it achieves its ambitions without incurring unnecessary costs for taxpayers and consumers.

DESNZ had planned to prepare a first draft of its delivery plan with key decision points, risks, mitigations and interdependencies by October 2022. But its work in response to the cost of energy crisis required it to scale back its work on coordinating long-term power sector decarbonisation. At the time of our report (March 2023), it still had more work to do to develop a delivery plan. In December 2023, DESNZ wrote to the Public Accounts Committee saying it was aiming to publish the plan by Spring 2024.

DESNZ is aware that the 2035 ambition requires all existing technologies (such as offshore wind and nuclear power) to be deployed at or close to the maximum technically feasible level. A delivery plan would help it test its approach's resilience and identify alternative pathways if required.

Update on the rollout of smart meters (June 2023)

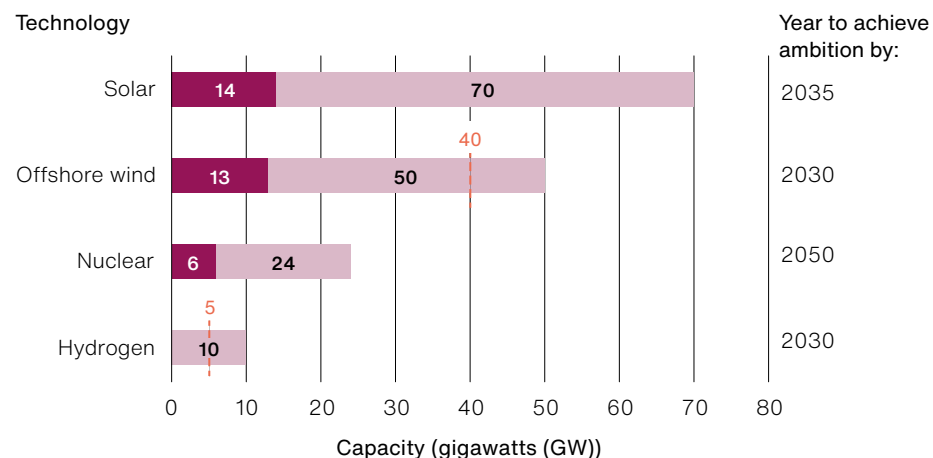
Smart meters, and the information they generate, can encourage consumption patterns which better align energy use with availability of energy from intermittent renewable sources. Over winter 2022-23, 1.5 million households and businesses participated in the Demand Flexibility Service, reducing consumption by over 3,300 MWh (enough to power nearly 10 million homes for one hour), indicating the potential scope for flexible demand.

In March 2023, 57% of gas and electricity meters were smart meters. At the time of our report, DESNZ had a proposal under consultation to achieve at least 80% household smart meter coverage by 2025, well behind its original target to complete the rollout by 2019.

DESNZ's most recent analysis suggested consumers with smart meters reduce their electricity use by between 3.3% and 3.6%, and reduce their gas use by between 2.9% and 3.1%. However, our report found that DESNZ needs more up-to-date data to continue to be confident that smart meters are saving consumers money on their energy bills.

Current generating capacity and ambitions by technology, February 2023

The ambitions, as set out in the British Energy Security Strategy (BESS), will require a large increase in capacity across solar, offshore wind, nuclear and hydrogen



- Current capacity
- Current ambition in the BESS (figures expressed as 'up to' XX GW)
- ⋮ Ambition prior to the BESS

Notes

- The figure includes the ambitions prior to the BESS for offshore wind and hydrogen. The government did not publish similar ambitions for nuclear or solar prior to the ambitions set out in the BESS.
- The most recent published capacity values are used for 'current capacity': solar is from September 2022; offshore wind is from January 2023; nuclear is from February 2023; and hydrogen is from April 2022. Current capacity figures are rounded to the nearest whole number.

Source: First published in *Decarbonising the power sector*, March 2023. National Audit Office analysis of published data and the British Energy Security Strategy. Available at: www.gov.uk/government/publications/british-energy-security-strategy/

Part Three • Key themes from our audit work

Managing the impact on consumers of energy market volatility

Energy prices have risen significantly since 2021. We have published three reports on how DESNZ/BEIS has managed the impact on consumers.

The energy supplier market (June 2022)

Our report concluded that Ofgem had not done enough to ensure that the energy supplier sector was resilient to external shocks – and that the resulting risk of supplier failure largely rested with consumers. Between July 2021 and June 2022, 29 suppliers with four million customers failed (including Bulb, which had approximately 1.6 million customers).

At the time we reported, Ofgem estimated that supplier failures (excluding Bulb) would cost customers £2.7 billion – £94 per customer.

Energy bills support (February 2023)

Our report assessed BEIS's schemes to provide financial support to consumers and businesses to help them deal with high energy costs following Russia's invasion of Ukraine. These schemes were expected to cost £69 billion at the time we reported – significantly less than the original estimate of £139 billion.

We concluded that greater targeting of support could reduce the cost of future schemes. However, BEIS would need to take a more sophisticated approach to financial control and address the potential increased risk of fraud and error if eligibility rules became more complicated.

Investigation into Bulb Energy (March 2023)

BEIS spent £3.02 billion on supporting Bulb Energy, the largest supplier to fail, between November 2021 and January 2023. Bulb entered a Special Administration Regime as it was no longer able to continue trading.

We reported that DESNZ expected to recover £2.96 billion of this from Octopus (which acquired Bulb). Billpayers were expected to bear the remaining £246 million, and any shortfall in the amount repaid by Octopus. When reviewing the proposed acquisition, Ofgem noted that Octopus had a weaker financial position than other large suppliers.



Part Three • Key themes from our audit work

Coordinating government's net zero mission

Achieving net zero will require DESNZ to work with other UK government departments and co-operation between the UK government and devolved administrations.

Support for innovation to deliver net zero (May 2023)

The October 2021 Net Zero Research and Innovation Framework set out 31 'challenge areas' where research and innovation is needed to achieve net zero by 2050. Our report found that the government expected to spend £4.2 billion on net zero research and innovation over the current Spending Review period (April 2022 – March 2025). While DESNZ has been responsible for achieving net zero since the February 2023 machinery of government changes, the Department for Science, Innovation & Technology (DSIT) is responsible for supporting research and innovation. Eight public bodies are responsible for the 115 programmes although the majority are the responsibility of UK Research and Innovation (which is now part of DSIT). We also found that no single organisation is responsible for overseeing the end-to-end performance of the innovation system, and that DESNZ has not defined the outcomes it is seeking to achieve from the 'challenge areas' or the level of risk it was willing to tolerate. The complexity of public sector spending will also make it hard for DESNZ to track spending.

Approaches to achieving net zero across the UK (September 2023)

We worked with Audit Scotland, Audit Wales and the Northern Ireland Audit Office to produce this report. We (jointly) identified four themes:

- The four nations have different emissions profiles and varied approaches to achieving net zero but the choices they make must ultimately deliver net zero at the UK level.
- Given the different net zero targets, carbon budgets and policies across the nations, there will be opportunities for the governments to learn from each other.
- Achieving net zero in any one nation depends on UK-level action and vice versa.
- Effective working relationships and close engagement between the UK and devolved governments will be vital to achieving the overall aim of net zero.

Page 17 shows the roles of different departments within the UK government.

The government's support for biomass (January 2024)

Biomass can be used to generate power or heat or as a fuel for vehicles. The government considers biomass to be a low-carbon alternative to fossil fuels if it is produced from sustainable sources, while it has potential to generate 'negative emissions' if deployed with carbon capture. DESNZ published government's Biomass Strategy in August 2023, setting out the principles that departments should take account of when prioritising the use of biomass, given potential limits to supply. Between 2002 and 2023, consumer- and taxpayer-funded schemes provided £22 billion of support for the use of biomass in the power and heating sectors. DESNZ considers that its sustainability monitoring arrangements are proportionate and give it sufficient confidence that industry is meeting sustainability standards. In our view, the lack of an evaluation of its monitoring arrangements means the government cannot demonstrate that they are adequate.

Part Three • Key themes from our audit work

Coordinating government's net zero mission *continued*

DESNZ holds overall policy responsibility for net zero, but many other government departments lead or co-lead in specific sectors or cross-cutting 'enablers' to achieving net zero.

In *Approaches to achieving net zero across the UK*, we set out the arrangements for coordinating the main departments involved in achieving net zero:

The Domestic and Economic Affairs (Energy, Climate and Net Zero) Committee is a Cabinet committee chaired by the Deputy Prime Minister and is responsible for considering matters relating to energy, and to the delivery of the UK's domestic and international climate strategy.

The Climate Change Integrated Review Implementation Group (CC IRIG) is a group of senior officials from the main departments across the UK government with responsibility for establishing and implementing a cross-government climate action strategy and covering domestic and international aspects of mitigation, resilience and nature. It is supported by four subgroups.

The Interministerial Group for Net Zero, Energy and Climate Change is a group led by ministers from across the UK nations with the purpose of supporting effective engagement and collaboration on the delivery of the UK's domestic and international climate commitment.

Policy responsibility for net zero by government department

	CO	HMT	DBT	Defra	DESNZ	DfE	DfT	DHSC	DLUHC	DSIT	DWP	FCDO	OGD
Sectors													
Transport	●		●	●	●		Lead	●					
Business/industry	●		●	●	Lead	●		●					
Buildings	●		●		Lead	●		●	Lead				
Power and greenhouse gas removals	●		●	●	Lead	●		●					
Agriculture, land use, land-use change and forestry, and waste	●		●	Lead	●								
Cross-cutting themes													
Green finance		Lead	●	●	Lead	●			●			●	
Greening government	●	●	●	Lead	●	●	●	●	●	●	●	●	●
Innovation		●	●	●	●					Lead			
Skills		●	●	●	●	Lead	●		●		●		
Trade policy		●	Lead	●	●							●	
Public procurement	Lead	●	●	●	●	●	●	●	●	●	●	●	●
Global influence	●	●	●		●								Lead

Notes

- 1 This figure serves as an update to Figure 5 of the NAO's *Achieving Net Zero* (December 2020) report.
- 2 CO = Cabinet Office; HMT = HM Treasury; DBT = Department for Business & Trade; Defra = Department for Environment, Food & Rural Affairs; DfE = Department for Education; DfT = Department for Transport; DHSC = Department of Health & Social Care; DLUHC = Department for Levelling Up, Housing & Communities; DSIT = Department for Science, Innovation & Technology; DWP = Department for Work & Pensions; FCDO = Foreign, Commonwealth & Development Office; OGD = other government departments.

Source: National Audit Office analysis of Department for Energy Security & Net Zero documents

Part Three • Key themes from our audit work

Delivering at speed

To achieve its immediate and longer-term objectives, DESNZ is increasingly having to work at speed.

DESNZ's overall capacity

The [BEIS 2022-23 annual report](#) included a summary of the Government Internal Audit Agency's work on BEIS in 2022-23. This summary noted that BEIS (DESNZ's predecessor) had "maintained an adequate system of governance, risk management and internal control" in 2022-23. However, "the position had a slight deterioration from prior year with BEIS seeking to deliver an increasingly broad, complex, and fast paced mission with fixed capacity and constrained (at least in the short term) capability; and disruption to the control environment caused by machinery of government changes."

We [found in 2010](#) that while reorganisations were often aimed at improving efficiency and delivery, they could lead to a period of underperformance as departments got up to speed. Reorganisations can lead to lower staff morale, productivity and loss of expertise/institutional memory.

Energy bills support

During 2022, the government announced a series of measures to protect billpayers from energy price rises. BEIS rolled out one scheme to support households in just over three weeks and a separate scheme to support non-domestic users within two months.

Our report concluded that "BEIS deserves credit for working quickly to introduce the schemes so that most households and businesses have received support in time for winter, and for flexing its approach to approving new programmes and to staffing to enable it to do so." However, there were downsides: "BEIS recognised that by moving at speed it had to make compromises. For example, the schemes provided almost universal support which could lead to financial support going to households and businesses which did not need it."

Autumn Statement announcements

The [Autumn Statement](#) set out the government's intent to build new electricity grid infrastructure in half the time (seven years, compared to 14 years currently) and dramatically reduce the time it takes to connect new renewable infrastructure to the grid (from five years, to six months on average). The Transmission Acceleration Action Plan and Connections Action Plan have set several milestones in the next year. These include: production of a Green Jobs Plan and Skills Bootcamps in the next six months, work to make infrastructure more acceptable (through developing schemes to offer bill discounts and other community benefits) and establishing the new, independent Future System Operator (which will ultimately take a whole-energy-system approach to planning and developing the network). DESNZ will need to work at pace, and with partners, to ensure these milestones are achieved.

Part Four • Major programmes

Major programmes and key developments

DESNZ leads the delivery of 19 of the 244 major projects included in the Government Major Projects Portfolio (GMPP). As at 31 March 2023 DESNZ had the fifth largest number of projects and the third largest whole-life cost by department, on the GMPP.

Department for Energy Security & Net Zero (DESNZ) projects and programmes on the Government Major Projects Portfolio (GMPP), 2019-20 to 2022-23

DESNZ had 19 projects on the GMPP, as at the end of March 2023

Programme	Delivery confidence assessment (DCA)				End date	Cost (£mn)	Monetised benefit (£mn)
	2019-20	2020-21	2021-22	2022-23			
Geological Disposal Facility Programme Construction of a permanent facility as a solution to long-term management of higher-activity radioactive waste in the UK (excluding Scotland).	Amber	Green	Amber	Amber	March 2050	20,300	Not provided
Smart Metering Implementation Programme Replace traditional gas and electricity meters with smart meter equivalents.	Amber	Amber	Amber	Amber	December 2025	20,177	34,130
Energy Bills Support Scheme Provide a one-off £400 reduction to domestic energy bills for the significant majority of households in Great Britain and Northern Ireland.				Amber	October 2023	12,455	12,415
Social Housing Decarbonisation Fund Decarbonise social housing over the 2020s in pursuit of carbon and fuel poverty targets.		Amber	Amber	Amber	March 2030	4,721	10,326
Public Sector Decarbonisation Scheme Grants to public sector bodies to fund heat decarbonisation and energy efficiency measures.		Amber	Amber	Amber	March 2025	2,598	5,324
Sellafield Product and Residue Store Retreatment Plant A facility to process special nuclear material, such as plutonium, into a form suitable for safe and secure storage until 2120.	Amber/red	Amber	Green		October 2029	1,380	Not provided
SIXEP Continuity Plant Replace existing effluent treatment plant at Sellafield, including providing interim waste storage capability.	Amber/red	Amber	Green		January 2031	1,034	Not provided
Replacement Analytical Project Replace existing analytical facilities at Sellafield.	Amber	Red	Red		July 2028	712	Not provided

See note 2 on page 21 for detailed DCA definitions.

Continued on page 20 →

Part Four • Major programmes

Major programmes and key developments *continued*

DESNZ leads the delivery of 19 of the 244 major projects included in the Government Major Projects Portfolio (GMPP). As at 31 March 2023 DESNZ had the fifth largest number of projects and the third largest whole-life cost by department, on the GMPP.

Department for Energy Security & Net Zero (DESNZ) projects and programmes on the Government Major Projects Portfolio (GMPP), 2019-20 to 2022-23 *continued*

Programme	Delivery confidence assessment (DCA)				End date	Cost (£mn)	Monetised benefit (£mn)
	2019-20	2020-21	2021-22	2022-23			
Home Upgrade Grant: Phase 2 Install energy efficiency measures and implement low-carbon heating in low-income, off-gas-grid homes in England.				Amber	March 2025	676	1,839
Green Homes Grant: Local Authority Delivery Grants from the government to local authorities in England to support energy improvements to the worst-quality homes by installing energy efficiency measures and low-carbon heating.		Amber	Amber	Amber	April 2023	509	2,202
Low Cost Nuclear Programme (Rolls Royce SMRs Challenge) R&D and innovation to further develop the UK small modular reactor power station concept.			Amber	Amber	March 2025	468	280
Green Heat Network Fund Capital grant fund that supports commercialisation and construction of new low- and zero-carbon heat networks, retrofitting and expansion of existing heat networks to make them low carbon, and development and growth of the heat network market.				Amber	March 2025	298	2,267
Local Authority Delivery Phase 3 Install energy efficiency upgrades and implement low-carbon heating in low-income, on-gas-grid homes in England.			Amber	Green	March 2024	290	736
Net Zero Hydrogen Fund Support the commercial deployment of new low-carbon hydrogen production projects during the 2020s.			Amber	Amber	March 2025	242	4,390
Home Upgrade Grant: Phase 1 Install energy efficiency measures and implement low-carbon heating in low-income, off-gas-grid homes in England.		Amber	Amber	Amber	March 2024	222	604

Continued on page 21 →

Part Four • Major programmes

Major programmes and key developments *continued*

DESNZ leads the delivery of 19 of the 244 major projects included in the Government Major Projects Portfolio (GMPP). As at 31 March 2023 DESNZ had the fifth largest number of projects and the third largest whole-life cost by department, on the GMPP.

Department for Energy Security & Net Zero (DESNZ) projects and programmes on the Government Major Projects Portfolio (GMPP), 2019-20 to 2022-23 *continued*

Programme	Delivery confidence assessment (DCA)				End date	Cost	Monetised benefit
	2019-20	2020-21	2021-22	2022-23		(£mn)	(£mn)
Spherical Tokamak for Energy Production Design and build a prototype fusion energy plant capable of delivering net- energy to the grid.				Amber	March 2024	218	Not provided
Carbon Capture, Usage and Storage (CCUS) Support the deployment of CCUS in two industrial clusters by the mid-2020s and a further two clusters by 2030.			Amber	Exempt	December 2030	Exempt	Not provided
Industrial Decarbonisation and Hydrogen Revenue Support (IDHRS) IDHRS will cover lifetime costs for Industrial Carbon Capture and hydrogen business models.			Exempt	Amber	December 2050	Exempt	Exempt
Sizewell C Negotiate and design a viable funding/financing model for Sizewell C in Suffolk, a large-scale nuclear project.			Exempt	Exempt	Exempt	Exempt	Exempt
Total excluding exempted data						66,300	74,500
Total including exempted data						130,600	74,500

Notes

- The figure only includes programmes that were part of the Government Major Projects Portfolio in March 2023.
- The DCA is an evaluation by the Infrastructure and Projects Authority (IPA) or the Senior Responsible Owner of a project's likelihood of achieving its aims and objectives and doing so on time and on budget. They are ratings at a fixed point in time and use a five-point scale:
 - Green means 'successful delivery of the project on time, budget and quality appears highly likely'.
 - Amber/green means 'successful delivery appears probable'.
 - Amber means 'successful delivery appears feasible but significant issues already exist, requiring management attention'.
 - Amber/red means 'successful delivery of the project is in doubt, with major risks or issues apparent in a number of key areas'.
 - Red means 'successful delivery of the project appears to be unachievable'.
 - Some data is exempt from publication (shown in grey).
- Amber/green and amber/red ratings were no longer issued from 1 April 2021, when the IPA moved from a five-tier to a three-tier system.
- 'End date' is the latest approved end date for the programme.
- Blank boxes are where programmes were not on the GMPP at that reporting date.
- Totals have been rounded to the nearest hundred million pounds.

Sources: Infrastructure and Projects Authority, *Annual Report on Major Projects 2022-23* and *DESNZ Government Major Projects Portfolio Data March 2023*