Department for
Business, Energy
& Industrial Strategy

Energy Bill Summary Impact Assessment

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Contents

Summary

The measures in this Energy Bill will pave the way for a secure, clean and affordable energy system. The measures will help deliver the commitments in the Prime Minister's Ten Point Plan[1] and British Energy Security Strategy[2]. The Bill is comprised of the three pillars below. More detail in section 1.1.

1. Leveraging investment in clean technologies
2. Reforming our energy system and protect consumers
3. Maintaining the safety, security and resilience of our energy system

This Bill is expected to build a more secure, homegrown energy system that is cleaner and more affordable. Headline impacts are outlined below. More detail in section 2.

- **Primary legislation** in this Bill is estimated to have a **net benefit to society of around £300 million[3],** despite an **annual net direct cost to business of around £9 million[4]**.
- Initial illustrative estimates suggest that the **secondary legislation** to implement the measures in this Bill will have **a significant additional net benefit to society**.
- For the measures where consumer bill impacts have been quantified, there is estimated to be a small average **annual energy bill cost of less than just £1** for dual fuel households out to 2030. However, several policies help improve system efficiencies and therefore provide consumer savings in the long run. Wider impacts on bills from other policies are uncertain and depend on future funding decisions[5].
- The Bill includes measures on heat network zoning and clean heat market mechanism, with estimated **greenhouse gas emissions savings of around 70 $MtCO_2e$[6]**, amounting to a social benefit of **around £13 billion[7] based on HMG's carbon values**.

[1] HM Government (2020), The ten point plan for a green industrial revolution, available at: https://www.gov.uk/government/publications/the-ten-point-plan-for-a-green-industrial-revolution
[2] BEIS (2022), British Energy Security Strategy: Secure, clean and affordable British energy for the long term, available at: https://www.gov.uk/government/publications/british-energy-security-strategy/british-energy-security-strategy
[3] Net present value over 10-20 years depending on the appraisal period of the measure, 2020 prices, all measures discounted to 2022 irrespective of when they come into effect, rounded to the nearest million.
[4] Equivalent annual net direct cost to business (EANDCB), 2020 prices, 2022 present value base, rounded to the nearest million.
[5] This estimate is subject to change because many of these savings will not be realised until secondary legislation stage and many policies have not quantified secondary legislation impacts yet. In addition, this estimate represents the average dual fuel household, but the final saving for consumers will depend on a) their level and pattern of energy consumption, b) their energy tariffs and c) whether they benefit from targeted measures. This will vary across households.
[6] Million tonnes of carbon dioxide equivalent, rounded to one significant figure. Other measures may also lead to emissions savings but those emissions savings have not been quantified. The total emissions reduction has been aggregated across different appraisal periods depending on the policy.
[7] 2020 price base, 2022 present value base, rounded to the nearest billion.

Of the 30 measures included in this Bill, only eight are expected to have direct impacts due to the primary legislation. The net present value (NPV)[8] and equivalent annual net direct cost to business (EANDCB)[9] for the measures that have primary legislation impacts are outlined in table 1. Estimates are in 2020 prices and all measures have been discounted to 2022 for comparison, irrespective of the date they come into effect. More detail is provided in section 2.1 and a full assessment is provided in the impact assessments listed in annexes 1-3.

Table 1: Summary of primary legislation impacts

	Policy measures	Primary legislation NPV[10]	Primary legislation EANDCB[11]
1.1	CO_2 transport and storage regulatory investment (TRI)	-£14m	£1m
1.3	Hydrogen heating village grid conversion trial	Not quantified[12]	Not quantified
2.1	Special mergers regime for energy networks	-£180m[13]	£8m
2.2	Energy industry code reform	-£16m	No business impacts
2.3	Multi-purpose interconnectors	>-£0.1m	<£0.1m
2.4	Defining electricity storage	>-£0.1m	<£0.1m
3.2	Final stages of nuclear decommissioning	£490m	No business impacts
3.3	Downstream oil resilience	£24m	<£0.1m
TOTAL		**£300m**	**£9m**

The overarching rationale for the interventions in this Bill includes correcting the negative externalities of greenhouse gas emissions to enable clean energy, addressing equity concerns to ensure bills are affordable, and supporting provision of energy security to address the free-

[8] Net present value (NPV) is a generic term for the sum of a stream of future values (costs and benefits) that have been discounted to bring them to present value. A positive NPV represents a net benefit and a negative NPV represents a net cost.
[9] The equivalent annual net direct cost to business (EANDCB) measures the direct annual costs and benefits to business or civil society organisations. It focusses on those impacts immediately felt by those businesses directly impacted by the regulatory change. A positive EANDCB represents a net cost and a negative EANDCB represents a net benefit.
[10] 2020 prices, 2022 present value base
[11] 2020 prices, 2022 present value base
[12] Qualitative impact assessment.
[13] This NPV is negative, yet there is an avoided transfer from consumers to energy network companies of an estimated £600 million. This is a benefit to consumers yet is not captured in the NPV as this is a transfer. Therefore, we expect this policy to protect consumers, which is its main objective.

rider problem. More detail is provided in section 1.2 and the rationale for intervention specific to each policy is provided in the impact assessments listed in annexes 1-3.

1. Policy rationale

1.1 Policy background

The measures in this Energy Bill will pave the way for a secure, clean and affordable energy system. The measures will help deliver on the commitments in the Prime Minister's Ten Point Plan[14] and British Energy Security Strategy[15]. The impact assessments in annexes 1 to 3 provide the policy background, including specific objectives and the problem under consideration for each policy measure. The Energy Bill is comprised of three key pillars:

1. **Leveraging investment in clean technologies** to reduce emissions from industry, transport and potentially heat, and provide low carbon power when the wind is not blowing, or the sun does not shine.
    - The Bill makes provisions aimed at accelerating the growth of low carbon technologies in the UK, helping us to reduce emissions and secure UK energy needs. It aims to facilitate state-of-the-art business models for carbon dioxide (CO_2) transport and storage, industrial carbon capture (ICC) and hydrogen. This will enable the Government to provide investors with the certainty of long-term revenue to kick start and scale up these technologies, create new industries and transform our former industrial heartlands.
    - The Bill will enable the delivery of a large village hydrogen heating trial by 2025, providing crucial evidence to inform strategic decisions in 2026 on the role of hydrogen in heat decarbonisation.
    - The Bill will establish a market-based mechanism for the low-carbon heat industry to step up investment and lower the cost of electric heat pumps, through scale and innovation.
    - Through this Bill, the UK will be the first country to legislate for fusion regulation, providing clarity on the regulatory regime for fusion energy facilities and removing uncertainty for the fusion industry.

2. **Reform our energy system and protect consumers** as we strengthen energy security and minimise costs.
    - The Bill will establish a Future System Operator, an independent body with responsibilities in both the electricity and gas systems, ensuring efficient energy planning, enhancing energy security, minimising cost to consumers and promoting innovation.
    - Transitioning to a smart and flexible energy system is essential to improving energy security, reducing consumer bills, and meeting our targets for Net Zero. We are introducing smart-related measures to ensure the electrification of heat and transport can be delivered securely and at the lowest cost to consumers. And we

[14] HM Government (2020), The ten point plan for a green industrial revolution, https://www.gov.uk/government/publications/the-ten-point-plan-for-a-green-industrial-revolution

[15] BEIS (2022), British Energy Security Strategy: Secure, clean and affordable British energy for the long term, available at: https://www.gov.uk/government/publications/british-energy-security-strategy/british-energy-security-strategy

are continuing to drive industry progress on the smart meter rollout which is set to deliver a £6 billion net benefit to society.
    - We are also legislating to overhaul the way that the technical and commercial rules of the energy system are governed, to enable innovation and ensure that they can meet the pace of change required to deliver Net Zero
    - The energy price cap is the best safety net for 22 million households, preventing suppliers from overcharging consumers. The Bill will enable the extension of the price cap beyond 2023.
    - This Bill will enable competition in onshore electricity networks, delivering up to £1 billion savings for consumers by 2050 from projects over the next ten years.
    - The Bill will also bring forward powers for heat networks. By appointing Ofgem as the new regulator for heat networks, we will ensure consumers get a fair price and a reliable supply of heat. And by enabling heat network zoning in England, this will overcome barriers to deployment that the heat network market currently faces and ensure this sector can contribute to delivering net zero in the most cost-effective way.

3. **Maintain the safety, security and resilience** of our energy system.
    - The British Energy Security Strategy is clear that nuclear remains an important part of the UK's energy mix. Through this Bill we will support and help nuclear deliver its important role and remove potential barriers to future investment by enhancing our nuclear third party liability regime.
    - The Bill will also facilitate the safe, and cost-effective clean-up of the UK's legacy nuclear sites, ensuring the UK is a responsible nuclear state by legislating on the licensing of geological disposal facility.
    - We will reduce the risk of fuel supply disruption by giving Government the power to give directions to, require information from, and provide financial assistance to core fuel sector businesses to ensure resilience and continuity of fuel supply.
    - This Bill will introduce legislation to enable the Civil Nuclear Constabulary to utilise their expertise in deterrence and armed response to support the security of other critical infrastructure sites, or provide other policing services in the interests of national security.

On territorial extent and application, this Bill primarily extends and applies UK-wide, with some measure extending only to GB and a small number to England and Wales only or England only.

1.2 Rationale for intervention

The overarching rationale for intervention is to ensure that our energy system is secure, clean and affordable. Given the large number of policies, the specific rationale for intervention varies widely across the measures in the Bill. See the impact assessments listed in annexes 1-3 for the rationale for intervention specific to each policy.

- **Energy security – quasi-public good.** Energy security is non-excludable because once energy security is provided, it is not possible to exclude individuals from benefitting from it. This leads to a free-rider problem, whereby individuals can benefit from energy security

without contributing towards its cost. In a free market, firms may not provide a socially optimal level of energy security as they have difficulty recouping the cost of doing so (given it's not possible to exclude people from its benefits). Therefore, in the absence of government intervention, energy security is likely to be under-provided.

- **Affordable energy – equity considerations.** The cost of energy makes up a higher proportion of total income for those on lower incomes compared to those on higher incomes. This causes equity concerns given energy is a necessity good that is needed for basic human existence, providing a rationale for government intervention.
- **Clean energy – greenhouse gas emissions are a negative externality.** The overarching rationale behind government action to decarbonise energy is to correct the negative externalities of emissions. Government intervention is needed to address the social cost of emissions from the production of energy from unabated fossil fuels. In the absence of government intervention, energy from unabated fossil fuel sources would be over-produced due to the private costs of their production being lower than the social costs, which include pollution costs borne by wider society.

1.3 Options considered

The policy options considered, including alternatives to regulation, are outlined in each of the impact assessments listed in annexes 1-3. Where appropriate, policies include a long list and short list of options and consideration of non-regulatory options.

2. Summary of impacts

This section summarises the policies and their key impacts (section 2.1), consumer impacts (section 2.2), security of energy supply impacts (section 2.3), emissions impacts (section 2.4) and small and micro business impacts (section 2.5). This Bill primarily extends and applies UK-wide, with some measure extending only to GB and a small number to England and Wales only or England only.

2.1 Policies and key impacts

Table 2 describes each of the policies in this Bill, their impacts, net present value (NPV), and equivalent annual net direct cost to business (EANDCB). The NPV and EANDCB are in 2022 present value terms and all metrics are in 2020 prices. Only eight policies in the Bill have direct impacts as a result of the primary legislation. These are outlined in the bullets below and are included at the top of each pillar in table 2. The NPV and EANDCB estimates are only indicative of the impacts of possible secondary legislation, meaning a further impact assessment would be required at secondary legislation stage. Therefore, most policies fall under scenario 2[16] according to the Regulatory Policy Committee (RPC) primary legislation impact assessment guidance,[17] unless no secondary legislation is expected. Column 2 of table 2 below also outlines which policies are regulatory provisions or non-regulatory provisions.

Policies that have direct impacts due to this primary legislation:

- 1.1: CO_2 transport and storage regulatory investment (TRI)
- 1.3: Hydrogen heating village trial (no impacts)
- 2.1: Special merger regime for energy network companies
- 2.2: Energy industry code reform
- 2.3: Multi-purpose interconnectors (MPIs)
- 2.4: Defining electricity storage
- 3.2: Final stages of nuclear decommissioning
- 3.3: Downstream oil resilience

Primary legislation in this Bill is estimated to have a **net benefit to society of around £300 million**[18] and an **annual net direct cost to business of around £9 million**[19]. This has been

[16] Scenario 2 is where departments provide an indication of the likely scale of impacts but are unable to provide a robust assessment for validation until the secondary legislation stage.
[17] Regulatory Policy Committee (2019), RPC case histories – primary legislation IAs, https://www.gov.uk/government/publications/rpc-case-histories-primary-legislation-ias-august-2019
[18] Net present value (NPV), 2020 prices, all measures discounted to 2022 irrespective of when they come into effect, rounded to the nearest billion.
[19] Equivalent annual net direct cost to business (EANDCB), 2020 prices, all measures discounted to 2022 irrespective of when they come into effect, rounded to the nearest million.

calculated using the impact assessment calculator[20], which sums the NPVs and EANDCBs of each of the policies that have impacts from primary legislation. This has been calculated in 2020 prices and discounted to 2022. The appraisal period varies across policies, with a minimum of 10 years and a maximum of 20 years. The monetised benefits of each of the policies with primary legislation impacts are unrelated and therefore we do not expect any duplication of benefits in the total NPV from primary legislation. A total NPV from secondary legislation has not been provided due to a high degree of uncertainty, but initial illustrative estimates suggest that the secondary legislation enabled through this Bill could have a significant net benefit to society. Some NPVs presented in table 2 are negative. A footnote is provided explaining why this is the case for each negative NPV, but the overarching reasons are a) it has not been possible to monetise benefits at this stage and b) benefits will materialise with secondary legislation and have not been quantified at this stage. We expect a net benefit to society once these are considered.

The methodology, evidence base and models used to monetise impacts for each of the policies is outlined in the impact assessments listed in annexes 1-3. Most policies have conducted a cost-benefit analysis over a 10-year appraisal period or longer where appropriate. More detail on how consumer impacts and emissions impacts have been estimated is provided in section 2.1 and 2.4 respectively.

Table 2: Summary of all policies in the Bill and key impacts

	Policy	Description	Impacts	Metrics[21]
Pillar 1: Facilitating investment in new technologies				
1.1	**CO_2 transport and storage regulatory investment (TRI)** [Regulatory provision]	This policy introduces a regulatory and licensing regime to operate CO_2 transport and storage (T&S) networks and allows government support provision to T&S network operators.	**Costs:** • Familiarisation & legal costs to T&S companies • Ofgem costs • Implementation costs **Benefits:** • Enables deployment of a CO_2 T&S network • Emissions savings • Reduced costs for energy intensive industries • Protection of jobs and output	Primary legislation: NPV: -£14m[22] EANDCB: £1m Secondary legislation impacts not estimated

[20] BEIS (2013), Impact assessment calculator, https://www.gov.uk/government/publications/impact-assessment-calculator--3

[21] NPVs and EANDCBs are rounded to the nearest million, presented in 2020 prices, and discounted to 2022 irrespective of when the measure comes into effect. Appraisal periods very depending on the policy.

[22] This NPV is negative because a) benefits won't be realised until secondary legislation stage and b) it has not been possible to quantify emissions savings at this stage, which will represent the majority of the monetised benefits of the policy. We expect the NPV of this policy to be positive once benefits from secondary legislation are quantified.

	Policy	Description	Impacts	Metrics[21]
1.2	**Fusion regulation** [Non-regulatory provision]	This policy will amend the Nuclear Installations Act 1965 to exclude fusion energy facilities from being considered nuclear installations.	Clarity for industry, investors, and the public on the fusion regulatory framework	No primary or secondary legislation impacts
1.3	**Hydrogen heating village grid conversion trial** [Regulatory provision]	This policy will enable the delivery of a hydrogen heating village grid conversion trial in a safe, timely, and cost-effective way while maintaining consumer protection.	**Costs:** • Potential disruption where extended gas network powers are invoked • Small potential increased consumer engagement costs for gas networks **Benefits:** • Increased certainty for gas networks • Increased likelihood the trial will take place and the conversion process will be timely, efficient, and safe • Time off gas minimised for consumers taking part in the trial • Consumers protected	No primary or secondary legislation impacts estimated
1.4	**Hydrogen and industrial carbon capture (ICC) business models** [Non-regulatory provision]	This policy will enable financial assistance and counterparty powers to support the hydrogen and ICC business models, including powers which facilitate competitive allocation in the future.	**Costs:** • Levy costs to businesses and consumers • Administration and familiarisation costs to business and the delivery body **Benefits:** • Emissions savings • Air quality improvements • Cost savings from fuel switching • Jobs supported	No primary or secondary legislation impacts estimated

	Policy	Description	Impacts	Metrics[21]
1.5	**Hydrogen levy powers** [Non-regulatory provision]	This policy enables the creation of a dedicated hydrogen levy as set out in the Net Zero Strategy.	**Costs:** • Levy costs to businesses and consumers • Administration and familiarisation costs to business and the delivery body **Benefits:** • Emissions savings • Air quality improvements • Cost savings from fuel switching • Jobs supported	No primary or secondary legislation impacts estimated
1.6	**Clean heat market mechanism** [Regulatory provision]	This policy enables an obligation on, for example, gas and oil heating appliance manufacturers, to increase sales of low-carbon appliances such as heat pumps.	**Costs:** • Familiarisation costs • Higher capital costs for low-carbon heating • Change in energy demand costs • Compliance costs **Benefits:** • Increased low-carbon heating installations • Emissions savings • Air quality improvements • Innovation benefits	No impacts from primary legislation. Secondary legislation (illustrative): NPV: -£500m[23] EANDCB: £11m-£360m
Pillar 2: System reform and consumer protection				
2.1	**Special merger regime for energy networks** [Regulatory provision]	This policy will strengthen Ofgem's regulatory ability and protect consumers by providing the	**Costs:** • Administration and familiarisation costs • Foregone efficiency gains to network companies	Primary legislation: NPV: -£180m[24] EANDCB: £8m

[23] This illustrative NPV is negative because a) there are significant benefits related to decarbonising heat which it has not been possible to quantify, b) it does not capture benefits from other policies which this policy enables and c) conservative, highly sensitive assumptions are used. We expect this NPV would be positive if these were captured.

[24] This NPV is negative, yet there is an avoided transfer from consumers to energy network companies of an estimated £600 million. This is a benefit to consumers yet is not captured in the NPV as this is a transfer. Therefore, we expect this policy to protect consumers, which is its main objective.

	Policy	Description	Impacts	Metrics[21]
		Competition and Markets Authority (CMA) with further powers when considering energy network company mergers.	• Potential increase in emissions from the gas/electricity sector • Reduced revenue for network companies **Benefits:** • Lower network charges for consumers – estimated £2 reduction in the average annual dual fuel energy bill • Avoided deadweight loss	No secondary legislation expected
2.2	**Energy industry code reform** [Regulatory provision]	This policy will a) create a body that provides strategic direction across energy codes and b) create an empowered code manager function.	**Costs:** • Increased Ofgem costs • Learning and familiarisation costs **Benefits:** • Cost savings to industry due to fewer consultations • Reduced delays to code modifications • Reduced entry barriers for smaller firms	Primary legislation: NPV: -£16m[25] EANDCB: £0m Secondary legislation (illustrative): NPV: -£280m[26] EANDCB: £33m[27]
2.3	**Multi-purpose interconnectors** [Regulatory provision]	This policy introduces a new licensable activity for multi-purpose interconnectors (MPIs) under the existing regulatory regime, enabling MPI developers to obtain MPI-	**Costs:** • Familiarisation costs for existing non-MPI electricity licence holders **Benefits:** • Increased legal clarity for MPI developers • Potential for increased interconnection capacity • Potential for lower capital and operating costs for interconnection capacity	Primary legislation: NPV: >−£0.1m[28] EANDCB: <£0.1m No impacts expected from secondary legislation

[25] This NPV is negative because only smaller, peripheral benefits have been deemed possible to monetise, whilst all major costs of the policy have been monetised. This NPV should therefore be considered in parallel with non-monetised benefits.
[26] This illustrative NPV is negative because only smaller, peripheral benefits have been deemed possible to monetise, whilst all major costs of the policy have been monetised. This NPV should therefore be considered in parallel with non-monetised benefits.
[27] This estimate is illustrative and is not referenced in the full impact assessment (annex 2.2) because an EANDCB has not been submitted for validation at this stage given uncertainty around the secondary legislation.
[28] This NPV is negative as it includes familiarisation costs only.

	Policy	Description	Impacts	Metrics[21]
		specific licenses from Ofgem.	• Facilitate coordination of offshore infrastructure	
2.4	**Defining electricity storage** [Regulatory provision]	This policy will define electricity storage as a distinct subset of generation in the Electricity Act 1989.	**Costs:** • Familiarisation costs **Benefits:** • Increased investor confidence • Reduced risk of legal challenge • Cost savings for industry – legal advice no longer required to clarify the position of storage • Increased number of electricity storage projects	Primary legislation impacts: NPV: >−£0.1m[29] EANDCB: <£0.1m No secondary legislation expected
2.5	**Smart metering rollout** [Regulatory provision]	This policy extends powers to make licence and industry code modifications for the smart meter rollout from a current expiry of 1 November 2023 to a new expiry of 1 November 2028.	**Costs:** • Costs for energy suppliers to purchase of metering assets • Installation costs • Operation, maintenance, and IT costs to suppliers **Benefits:** • Energy savings for consumers • Lower consumer bills • Emissions savings • Lower customer service costs for energy suppliers • Maintains flexibility in the energy system	No primary or secondary legislation impacts estimated
2.6	**Future system operator** [Regulatory provision]	This policy creates a new independent future system operator (FSO), who will be able to drive progress towards net zero while maintaining	**Costs:** • Cost to purchase assets • Implementation costs • Potential loss of synergies between the gas system operator function and transmission assets **Benefits:**	No impacts from primary legislation. Secondary legislation (illustrative): NPV: £10m-£2,900m, mainly dependent on future electricity

[29] This NPV is negative as it includes familiarisation costs only.

	Policy	Description	Impacts	Metrics[21]
		energy security and minimising costs for consumers.	• Enhanced roles and responsibilities of the FSO • Greater 'whole-system' co-ordination and decision making	system cost savings due to a "whole system" view.
2.7	**Smart secure energy systems (SSES)** [Regulatory provision]	This policy will require organisations undertaking relevant "load control" activities to obtain a licence from Ofgem and comply with any licence conditions and codes attached to that licence.	**Costs:** • Compliance costs for licensees • Ofgem costs to enforce licenses • Technical infrastructure costs **Benefits:** • Increased uptake of demand side response (DSR) • Reduced costs of maintaining energy system stability • Protection against unfair treatment of consumers	No primary or secondary legislation impacts estimated.
2.8	**Smart heat pumps** [Regulatory provision]	This policy seeks powers to mandate that all electric space heating appliances sold in GB have smart functionality. Appliances in scope are heat pumps, storage heaters and heat batteries.	**Costs:** • Familiarisation and transition costs • Manufacturing costs • Increased customer service requirement • Enforcement and infrastructure costs **Benefits:** • Electricity system benefits from increased flexibility • Lower consumer bills • Emissions savings • Accelerated innovation and investment	No impacts from primary legislation. Secondary legislation (illustrative): NPV: Not estimated EANDCB: £19m
2.9	**Heat network zoning** [Regulatory provision]	This policy will see heat networks deployed in areas in England where they are the lowest cost, low	**Costs:** • Capital costs to deploy heat networks • Costs to designate heat network zones • Compliance costs • Disruption costs	No impacts from primary legislation. Secondary legislation (illustrative):

	Policy	Description	Impacts	Metrics[21]
		carbon heating solution.	**Benefits:** • Net energy savings as heat networks are more efficient • Supply chain development • Jobs and GVA benefits • Increase in the deployment of low carbon heat networks • Emissions savings • Lower system costs	NPV: -£450m[30] EANDCB: <£1m
2.10	**Heat network market framework** [Regulatory provision]	This policy will a) specify a heat network regulator and their powers, b) define heat network consumer protection measures and c) define heat network statutory powers.	**Costs:** • Compliance costs for heat network businesses • Ofgem costs to be the regulator **Benefits:** • Improved consumer protection • Improved technical standards • Support in meeting decarbonisation targets • Extra rights and powers to heat network owners/operators	No impacts from primary legislation. Secondary legislation (illustrative): NPV: -£70m[31] EANDCB: £7m
2.11	**Energy company obligation 4 (ECO4) buyout mechanism** [Regulatory provision]	This policy will remove current size-based supplier thresholds for ECO and will introduce a buy-out mechanism to ensure smaller suppliers can meet their ECO obligations without facing	**Costs:** • Costs for newly obligated suppliers • Potential reduction in ECO4 benefits if buy-out results in less energy efficiency measures delivered, which may have bill impacts **Benefits:** • Lower obligation on average for existing ECO4 suppliers • Reduced delivery costs for existing obligated suppliers	No impacts from primary legislation. Secondary legislation (illustrative): NPV: -£1m to -£90m[32] EANDCB: <£1m

[30] This illustrative NPV is negative because the following benefits have not been quantified – improved flexibility, supply chain improvements due to a strong signal of government ambition, jobs supported and GVA. In addition, impacts are uncertain at this stage and will be finalised at secondary legislation stage.
[31] This illustrative NPV is negative because benefits of the policy are not monetised at this stage, so this NPV should be considered in parallel with non-monetised benefits.
[32] This illustrative NPV is negative because benefits to the retail energy market of improved competition are not quantified and therefore not captured in this estimate.

	Policy	Description	Impacts	Metrics[21]
		disproportionately high costs.	• Improved competition as current market distortions are removed	
2.12	**Energy smart appliances** [Regulatory provision]	This policy will set requirements for energy smart appliances such as heating, ventilation, and air conditioning (HVACs), wet and cold appliances, home batteries and electric vehicle (EV) chargepoints.	**Costs:** • Familiarisation and transition costs • Manufacturing costs **Benefits:** • Increased flexibility from energy smart appliances • Reduced cyber-risk and increased safety and interoperability • Reduced electricity system costs • Emissions savings	No impacts from primary legislation. Secondary legislation (illustrative): NPV: £8m EANDCB: £2m
2.13	**Onshore electricity network competition** [Regulatory provision]	This policy will extend the competitive regime to the onshore electricity network.	**Costs:** • Setup costs • Cost of running tenders • Bidding costs **Benefits:** • Reduced construction and operating costs of future competition-eligible onshore network infrastructure through increased competition • Lower costs for energy consumers – estimated £1 reduction in the average annual dual fuel energy bill • Increased levels of innovation resulting in more efficient network build	No impacts from primary legislation. Secondary legislation (illustrative): NPV: up to £1bn. (Best estimate /central scenario: £300m-£500m) EANDCB: £10m
2.14	**Smart charge points** [Regulatory provision]	This policy will extend powers to set device level requirements around smart functionality, grid stability,	**Costs:** • Familiarisation costs • Increased costs to non-compliant business • Cost to enforcement officer associated with issuing new guidance	No primary or secondary legislation impacts estimated

	Policy	Description	Impacts	Metrics[21]
		interoperability, cyber, data security and safety to electric vehicle smart charge points.	**Benefits:** • Greater clarity for business on roles and responsibilities • Reduced incidence and duration of non-compliance, reducing the risk of grid instability • Reduced costs for enforcement officer	
2.15	**Energy performance of buildings** [Regulatory provision]	This policy will recover powers from the European Communities Act 1972 (ECA) which was lost when the EU Transition Period ended on 31 December 2020.	• No impacts from primary or secondary legislation.	No impacts from primary or secondary legislation
2.16	**Extension of the default energy tariff price cap** [Regulatory provision]	This policy will provide Ofgem with powers to extend the temporary price cap on default energy tariffs beyond the end of 2023.	**Costs:** • Potential cost to non-SVT consumers **Benefits:** • Lower costs for standard variable tariff (SVT) consumers • Potential efficiency improvements for suppliers • Reduced fuel poverty • Reduced revenue for energy suppliers	No primary or secondary legislation impacts estimated. Implemented independently by Ofgem.
Pillar 3: Safety and security				
3.1	**Accession to the Convention on Supplementary Compensat**	This policy will enable the UK to accede to the CSC, an international treaty which will expand the	**Costs:** A contingent liability on HMG (around £7.5m based on current conditions) and therefore the taxpayer, only affected in the event of an incident in a	Primary and secondary legislation impacts assumed to be zero given the low chance of a nuclear disaster

	Policy	Description	Impacts	Metrics[21]
	ion (CSC) for nuclear damage [Non-regulatory provision]	number of countries that are covered by the UK's nuclear third-party liability regime.	contracting party after exceeding the operator liability limit **Benefits:** • Ability for the UK to draw on the c.£120m international fund if a nuclear accident occurred in the UK which exceeded operator liability	
3.2	**Final stages of nuclear decommissioning** [Non-regulatory provision]	This policy will streamline the regulatory requirements applied to UK nuclear sites in the final stages of decommissioning and clean-up.	• The current overlapping regulation by the Office for Nuclear Regulation (ONR) and the environment agencies will be integrated in a manner consistent with international recommendations	Primary legislation: NPV: £490m EANDCB: N/a as NDA is a public body. Indirect impact: -£0.8m No secondary legislation impacts expected.
3.3	**Down-stream oil resilience** [Non-regulatory provision]	This policy will enable BEIS to collect data on oil product stocks e.g. in petrol stations; and provides for a power of direction by which BEIS can direct downstream oil companies to take certain actions to bring risks to fuel supply to acceptable levels.	**Costs:** • Compliance costs to downstream oil businesses **Benefits:** • Reduced disruption to fuel supplies • Reduced knock-on effects on the wider economy	Primary legislation: NPV: £24m EANDCB: <£0.1m Secondary legislation may not be expected.
3.4	**Oil and Gas Authority (OGA) ex ante powers**	This policy will improve the OGA's ability to ensure that the governance, technical and	**Costs:** • Administration and familiarisation costs **Benefits:**	No primary or secondary legislation impacts estimated

	Policy	Description	Impacts	Metrics[21]
	[Non-regulatory provision]	financial capability of a carbon storage or petroleum licensee is preserved following a change of its parent company.	• Improved business environment for quality mergers and acquisitions • Reduced risk of harms created by an undesirable change of control • Reduction in legal costs to the OGA and industry	
3.5	**Application to the territorial sea of requirement for nuclear site licence** [Non-regulatory provision]	This policy will clarify that nuclear sites, which are in or under the territorial sea adjacent to the UK, can be licensed and regulated.	• This measure is a technical clarification with no impacts	No primary or secondary legislation impacts estimated
3.6	**Offshore oil & gas (Habitats Assessment and Emergency Pollution Planning & Response)** [Non-regulatory provision]	This policy will allow the Offshore Petroleum Regulator for Environment and Decommissioning (OPRED) to ensure the offshore oil and gas environmental regulatory regime remains fit for purpose, supporting progress towards net zero emissions.	• Enabling OPRED to make future changes to secondary legislation	No primary or secondary legislation impacts estimated

	Policy	Description	Impacts	Metrics[21]
3.7	**Offshore oil & gas decommissioning cost recovery** [Regulatory provision]	This policy will ensure OPRED can fully recover the cost of providing its services from industry and will increase operators' efficiency of their decommissioning activities.	• No impacts as the total running costs are the same in every case • No net financial loss or gain as the savings to the taxpayer are equal to the additional costs to duty holders	No primary or secondary legislation impacts estimated
3.8	**Civil nuclear constabulary (CNC)** [Non-regulatory provision]	This policy will expand the CNC's services and clarify support mechanisms and cross-border enforcement powers to provide more efficient emergency responses, more effective arrest and warrant powers throughout the UK, and potentially better staff retention.	**Costs:** • Adaption of CNC's policing model • Administration costs for new bidding processes **Benefits:** • Lower recruitment and training costs • Potentially reduced costs for other critical infrastructure sites from increased competition • Faster emergency response • Improved quality of service through streamlining • More efficient and effective enforcement of offences across UK • Reduced administration costs over long-term by streamlining administrative barriers	No primary or secondary legislation impacts estimated

2.2 Consumer impacts

The impact on both domestic and non-domestic energy bills will depend on underlying energy prices and the future design of the specific measures that this primary legislation enables. The final saving for domestic and non-domestic energy consumers depends on various factors such as their level and pattern of energy consumption, their energy tariff, and whether they benefit

directly from targeted measures. This will vary across households and businesses. Many of the savings will also not be realised until secondary legislation stage and given the inherent uncertainties in their use, many policies do not have quantified secondary legislation impacts yet. The figures below therefore present a partial picture and are subject to change. The first section covers domestic (household) consumer impacts whilst the second section covers non-domestic (business) consumer impacts.

Domestic consumer impacts

The below estimates are presented as average impacts across households (e.g. targeted policies are assumed to be spread equally across all households) with illustrative assumptions on future gas and electricity prices used to calculate the saving on the bill. Any costs are spread equally across all relevant consumption.

The bullets below summarise the domestic consumer impacts of measures in this Bill. More detail is provided in the impact assessments listed in annexes 1-3.

- **Policies designed to increase competition between network companies reduce domestic consumer bills**. This includes both the special merger policy (annex 2.1) and the onshore electricity competition policy (annex 2.13) which are designed to reduce energy network costs through competition. This results in savings for all consumers, estimated to be around £2 for the average dual fuel household per year for the special merger policy and around £1 for the average dual fuel household per year for the onshore electricity competition policy.
- **Smart energy policies help to reduce domestic consumer bills**. Smart energy policies, such as the energy smart appliances measure (annex 2.12) will support the roll-out of these flexible technologies, helping users manage or reduce their bills by shifting electricity demand automatically to times of the day when energy is cheaper. However, these benefits are dependent on other factors such as the availability of time-of-use tariffs, smart meters, and demand side response service. In addition, the smart meter rollout measure (annex 2.5) ensures the rollout of smart meters continues at pace, delivering the benefits identified in the 2019 smart meter roll out cost-benefit analysis[33], which estimates a 3% reduction in electricity consumption.
- **Policies that strengthen regulations for future energy security, decarbonisation and consumer protections may marginally increase domestic consumer bills in the short-term, but with potential consumer savings in the long run.** The creation and delivery of new energy code functions through Ofgem (annex 2.2) and the creation of a new independent future system operator (FSO) (annex 2.6) will both likely require upfront costs that are passed on to consumer electricity bills. Together these schemes could add around £2 to the average household electricity bill out to 2030 but are also expected to enable greater efficiencies in the long run as the system is decarbonised. This could result in greater savings for consumers in the long run, but these benefits have not been quantified. The development of a heat network regulator and its powers (annex 2.9) will

[33] BEIS (2019), Smart meter roll-out: Cost benefit analysis, https://www.gov.uk/government/publications/smart-meter-roll-out-cost-benefit-analysis-2019

involve costs that, if recovered through all gas and electricity consumers, could increase the average bill by £1 out to 2030. However, given this will also set out heat network consumer protections it could result in savings for heat network consumers in the long run.

- **Some policies are intended to directly support decarbonisation but, at this stage, are too uncertain to be able to say whether consumer energy costs would increase or decrease as a result.** The deployment of low carbon hydrogen (annex 1.5) is essential to meeting decarbonisation targets and reducing reliance on fossil fuels, yet this measure could place costs on suppliers and increase consumer bills. However, this depends on the future funding mechanism that is agreed.

The impacts on domestic consumers of measures included in the Bill will differ based on their household characteristics, meaning costs and benefits will differ across the consumer base. For example, adopting clean heat technology currently has high upfront capital costs, which may be a barrier to adoption for lower income households in the short run. However, policies in this area aim to drive market scale and promote long-term cost reductions in low-carbon heating, reducing this barrier in the longer term. Smart energy policies also have upfront costs, which may affect take-up in lower income households. However, these policies are designed to drive market scale and reduce costs in the long-term. A more detailed discussion on how benefits may differ across different consumer groups, and how these are potentially mitigated for individual measures, is included in the impact assessments listed in annexes 1-3.

Non-domestic consumer impacts

Non-domestic organisations, including businesses, voluntary sector organisations, and public sector organisations are also consumers of energy. The figures below relate to the average non-domestic or industrial consumer, yet in reality, the final impacts will depend on a number of factors including their energy consumption, tariff, and if the measure is directly targeting them. Overall, measures in this bill will seek to reduce the final energy bills faced by non-domestic consumers, benefitting them in the long run.

The bullets below summarise the non-domestic consumer impacts of measures in this Bill. More detail is provided in the impact assessments listed in annexes 1-3.

- **Policies designed to increase competition between network companies reduce non-domestic consumer bills**. This includes both the special merger policy (annex 2.1) and the onshore electricity competition policy (annex 2.13) which are designed to reduce energy network costs through competition. Some savings will also accrue to businesses, although network costs (and therefore estimated savings) make up a smaller proportion of non-domestic consumer's energy bills, with some large non-domestic businesses directly connected to transmission networks, meaning they do not face distribution costs.
- **Some policies are essential to move us towards greater energy security, as well as to meet decarbonisation targets, but may increase non-domestic consumer bills, at least in the short-term.** The deployment of low carbon hydrogen through a levy (annex 1.5) could place costs on suppliers and increase non-domestic consumer bills. However,

this measure is essential for the energy transition and the exact bill increase is dependent on the future funding mechanism that is yet to be agreed. Smaller businesses (including SMBs) have higher baseline energy costs in £/MWh terms than larger businesses. This means that the consequent increase in gas and electricity prices would make up a smaller proportion of smaller businesses' baseline costs.

2.3 Impacts on security of energy supply

Currently, the capacity market helps to ensure security of electricity supply and the highly diverse and flexible sources of gas help to ensure security of gas supply. This Bill will further strengthen energy security by establishing a Future System Operator and ensuring smart energy. The bullets below summarise some of the energy security impacts of measures in the Bill. More detail is provided in the impact assessments listed in annexes 1-3.

- **Establishing a Future System Operator (FSO) increases energy security**. Currently, National Grid Electricity System Operator (ESO) is responsible for ensuring the stable and secure operation of the electricity system. The FSO policy in this Bill (annex 2.6) will establish a new independent FSO with enhanced roles and responsibilities, which will strengthen the System Operator's ability to ensure energy security.
- **Smart energy policies increase energy security**. Smart energy policies can help strengthen energy security by shifting electricity demand to off-peak times when there is low demand on the electricity system such as overnight, or to times of high renewable electricity generation. This flexible form of charging can reduce or defer costly investment in additional electricity generation capacity and network reinforcement and help balance the electricity system. This applies to all smart energy policies in the Bill, including the smart meter rollout (annex 2.5), smart secure energy systems (annex 2.7), smart heat pumps (annex 2.8), energy smart appliances (annex 2.12) and smart electric vehicle charge points (annex 2.14).
- **Policies designed to incentivise the shift from gas heating to low-carbon heating will increase energy security.** For example, the clean heat market mechanism policy (annex 1.6) incentivises the switch from gas and oil boilers to electric heat pumps, which consume significantly less energy for the same heat output. A reduction in gas and oil use increases energy security.

2.4 Emissions impacts

The Bill includes measures on heat network zoning and clean heat market mechanism, with estimated **greenhouse gas emissions savings of around 70 $MtCO_2e$[34],** amounting to a social benefit of **around £13 billion[35] based on HMG's carbon values**. Many of these savings will

[34] Million tonnes of carbon dioxide equivalent, rounded to one significant figure. Other measures may also lead to emissions savings but those emissions savings have not been quantified. The total emissions reduction has been aggregated across different appraisal periods depending on the policy.
[35] 2020 price base, 2022 present value base, rounded to the nearest billion.

not be realised until secondary legislation stage and many policies have not quantified secondary legislation impacts yet. These figures should therefore be interpreted as illustrative as they only present a partial picture and are subject to change at secondary legislation stage. In addition, the appraisal period varies between policies and there is a risk of duplication in summing the emissions estimates across both primary and secondary legislation. This is because, whilst we know primary legislation benefits are unrelated, there is still uncertainty around secondary legislation benefits this early in the policy-making process.

Whilst the figures above illustrate the total order of magnitude of emissions savings from this Bill, policies in this Bill impact emissions in different ways. Emissions impacts for some policies are outlined in table 2 and a full assessment is provided in the impact assessments listed in annexes 1-3. The bullets below summarise some of the emissions impacts.

- **Policies designed to incentivise the shift from gas heating to low-carbon heating will reduce emissions.** For example, the clean heat market mechanism policy (annex 1.6) incentivises the switch from gas and oil boilers to electric heat pumps which will reduce emissions. The clean heat market mechanism policy will save an estimated 19 $MtCO_2e$ of carbon emissions in the central deployment scenario (corresponding to an estimated benefit of £3.6bn[36]) over the lifetime of the low-carbon heating appliances installed under the policy[37].
- **Policies designed to support carbon capture operators will reduce emissions.** The hydrogen and industrial carbon capture (ICC) business models policy (annex 1.4) will enable financial assistance to support ICC business models, whilst also including powers to facilitate future competition. The CO_2 transport and storage regulatory investment (TRI) policy (annex 1.1) will allow government to provide support provisions to transport and storage (T&S) operators. These policies will allow for the meeting of HMG's ambition to capture and store 20-30Mt of CO_2 per year by 2030.
- **Policies which encourage the roll-out of hydrogen technologies will reduce emissions.** For example, the hydrogen and industrial carbon capture (ICC) business models policy (annex 1.4) and the hydrogen levy powers policy (annex 1.5) both enable financial assistance to support businesses in the hydrogen sector, which will lead to a reduction in emissions. Currently, we do not have estimates for emission savings from these two policies, as these benefits will only be realised once the policy is implemented at the secondary legislation stage.

2.5 Small and micro business impacts

Of the 30 policies included in this Bill, only 4 policies are expected to result in costs for small and micro businesses (SaMBs) at primary legislation stage and 4 policies are expected to result in proportionately higher costs on SaMBs at secondary legislation stage but have no impacts at primary legislation stage. For these policies, more detail is provided in the bullets under the headings below. These policies have been highlighted because a) they are expected to result in

[36] 2020 price base, 2022 present value base, rounded to the nearest 100 million.
[37] Secondary legislation impact, as the primary legislation will have no impact on emissions.

costs for SaMBs at this primary legislation stage which is what the RPC are validating at this stage or b) they are expected to result in proportionately higher costs for SaMBs at secondary legislation stage which is highlighted as an important factor in the RPC small and micro business assessment guidance[38].

The remaining 22 policies are less significant for this assessment because either a) they are not expected to result in costs or benefits to SaMBs at all (8 policies[39]), b) it is too early to do a full assessment of the costs and benefits for SaMBs at secondary legislation stage but there are no costs or benefits at primary legislation stage (4 policies[40]), c) they are expected to result in benefits for SaMBs at secondary legislation stage but there are no costs or benefits at primary legislation stage in most cases (3 policies[41]), or d) they are expected to result in proportionate costs for SaMBs at secondary legislation stage but there are no costs or benefits at primary legislation stage in most cases (7 policies[42]).

At this stage, no policies in the Bill have exempted SaMBs because this would prevent the benefits of the policy being realised in many cases. In addition, there are only two mitigations

[38] Regulatory Policy Committee (2019), RPC Small and Micro Business Assessment guidance, p.7.

[39] '1.1 CO_2 transport and storage regulatory investment (TRI)' is not expected to impact SaMBs because CO_2 transport and storage networks are likely to be operated by large businesses. '2.1 Special merger regime for energy network companies' is not expected to impact SaMBs as no energy network companies qualify as SaMBs, but SaMBs may indirectly benefit from reduced energy bills. For '2.3 Multi-purpose interconnectors', there are currently no licensees of operational interconnectors, offshore transmission assets or offshore wind assets that qualify as SaMBs, yet improving legal clarity could support SaMBs in attracting investment to scale up and become operational. '1.2 Fusion regulation' is not expected to impact businesses as it is a clause that will confirm the status quo and remove ambiguity. '2.15 Energy performance of buildings' is not expected to impact businesses as it will replace an EU power and maintain the status quo. '3.2 Final stages of nuclear decommissioning' is not expected to impact businesses as the NDA is a public body. '3.5 Application to the territorial sea of requirement for nuclear site licence' is not expected to impact businesses because it is a legislative amendment that will confirm the status quo. '3.8 Civil nuclear constabulary (CNC)' is not expected to impact businesses because it applies to public bodies only.

[40] 1.4 Hydrogen and industrial carbon capture (ICC) business models, 1.6 Clean heat market mechanism, 2.5 Smart metering implementation programme, and 2.8 Smart heat pumps.

[41] '2.13 Onshore electricity network competition' primary legislation has no impacts, but the secondary legislation is expected to reduce an entry barrier, enabling SaMBs to enter the electricity transmission network market, and may reduce bills for SaMB electricity consumers. '2.14 Smart chargepoints' primary legislation has no impacts, but the secondary legislation is expected to benefit SaMBs by providing greater clarification of roles and a reduction in responsibilities. '3.1 Accession to the CSC for nuclear damage' primary legislation is expected to benefit SaMBs by providing them with protection against claims from CSC contracting parties and encouraging SaMBs to be part of UK supply chains.

[42] '1.5 Hydrogen levy powers' primary legislation has no impacts, but the secondary legislation is expected to impose levy costs on all three major energy user groups (households, commercial users, and industry), some of which will be SaMBs, yet costs are not expected to be disproportionate as they are likely to be per-unit costs. '2.7 Smart secure energy systems' primary legislation has no impacts, but the secondary legislation is expected to impose costs such as license costs on DSR firms and chargepoint operators, but these costs are not expected to be disproportionate because Ofgem's 2021 license fee cost recovery principles ensure fees are based on market share. '2.11 ECO 4 buyout mechanism' primary legislation has no impacts, but the secondary legislation is expected to impose costs on 10 new energy suppliers, only 2 of which are SaMBs, but buy-out is intended to mitigate some impacts on these suppliers to avoid disproportionately high costs. '2.16 Extension of current temporary energy tariff price cap' primary legislation has no impacts, but the secondary legislation is expected to impose costs on energy suppliers, 8 of which are SaMB, yet costs are not expected to be disproportionate for SaMBs as they are likely to be per-customer costs. '3.4 Oil and Gas Authority (OGA) ex ante powers' primary legislation is expected to impose costs on licensees, yet administrative costs are expected to be very small and should not disproportionately impact SaMBs '3.6 Offshore oil & gas (Habitats Assessment and Emergency Pollution Planning and Response)' and '3.7 Offshore oil & gas decommissioning cost recovery' primary legislation has no impacts, but the secondary legislation is expected to impose costs on offshore oil & gas businesses, yet costs are proportionate to their percentage field equity which would typically be smaller for SaMBs.

across the Bill at this stage – '2.11 ECO4 buyout mechanism' includes a buyout mechanism to mitigate some impacts on the newly obligated suppliers to avoid disproportionately high costs and '3.3 Downstream oil resilience' exempts forecourts that supply less than 1,000 tonnes per year, but ad hoc manual monitoring will still be required during periods of disruption. See the impact assessments listed in annexes 1-3 for a full assessment of SaMB impacts for each of the policies. As mentioned above, see below for the policies that are expected to result in costs for SaMBs at primary legislation stage or may result in proportionately higher costs on SaMBs at secondary legislation stage.

Policies that are expected to result in costs for SaMBs at primary legislation stage:

- **1.3 Hydrogen heating village trial** – This measure is likely to impact a very small number of SaMBs as it only applies to the Gas Distribution Network Operators (GDNs) conducting the trial and the trial involves only 1,000-2,000 properties. SaMBs within the trial area may experience some disruption but this is unlikely to be significant.
- **2.2 Energy industry code reform** – This measure is expected to impact many SaMBs, as SaMBs make up around 97% of firms in the electricity sector and around 82% of firms in the gas sector. At primary legislation stage, all businesses are expected to incur familiarisation costs of £1,200-£2,400 per business. This cost could be proportionately higher for SaMBs as they have a smaller customer base to spread these costs over. However, overall, we expect the small familiarisation costs (which are likely to be passed onto consumers) to be outweighed by ongoing benefits from lower costs of interacting with the codes and a quicker process.
- **2.4 Defining electricity storage** – This measure is expected to impact many SaMBs, as SaMBs make up around 97% of firms in the electricity sector. At primary legislation stage, all businesses are expected to incur a familiarisation cost only of around £270 per business. This cost could be proportionately higher for SaMBs as they have a smaller customer base to spread these costs over. However, this cost is very small and it is not possible to exempt SaMBs. In addition, SaMBs may benefit from cost savings from no longer having to procure legal services relating to the definition of storage.
- **3.3 Downstream oil resilience** – This measure applies to forecourts without automatic wet stock monitoring that supply more than 1,000 tonnes per year, which will impact some SaMBs. At primary legislation stage, businesses in scope are expected to incur costs to provide data to government. However, these costs will not disproportionately burden SaMBs because the data provision requirements will be proportionate to the business size. It is estimated that around 20-30% of the total annual cost of data collection will be borne by SaMBs, amounting to £40,000[43] over the appraisal period.

Policies that may result in proportionately higher costs for SaMBs at secondary legislation stage but have no impacts at primary legislation stage:

- **2.6 Future system operator** – This measure is expected to impact many SaMBs, as SaMBs make up around 97% of firms in the electricity sector and around 82% of firms in

[43] Present value, discounted to 2022, 2020 prices.

the gas sector. Whilst no impacts are expected at primary legislation stage, all businesses are expected to incur familiarisation costs at secondary legislation stage. This cost could be proportionately higher for SaMBs as they have a smaller customer base to spread these costs over. However, this policy aims to reduce entry barriers by removing the potential conflict of interest, which is likely to benefit SaMBs by enabling them to enter the transmission network market and reducing bills.

- **2.9 Heat network zoning** – This measure is expected to impact heat network developers, heat network supply chain businesses, heat consumers and new build developers, some of which may be SaMBs. Whilst no impacts are expected at primary legislation stage, there will be familiarisation and connection costs at secondary legislation stage. Familiarisation costs, as a proportion of existing costs, will likely be higher for SaMBs. However, an exemption from these requirements isn't appropriate given that large district heat networks will be deployed in zones, and the heat network developers and operators will be required to familiarise themselves with the legislation to ensure consumers received the best outcome.
- **2.10 Heat network market framework** – This measure is expected to impact businesses involved in the development, operation, or management of heat networks, some of which may be SaMBs. Whilst no impacts are expected at primary legislation stage, all heat suppliers will face familiarisation, dissemination, annual reporting, and administration costs at secondary legislation stage. Annual reporting costs will be proportionate to the number of heat networks managed by a heat network supplier, yet familiarisation costs will likely be a higher proportion of existing costs for SaMBs. Exemptions and mitigations will be considered at secondary legislation stage.
- **2.12 Smart appliances** – This measure is expected to impact a range of businesses, but the burden is expected to fall mostly on manufacturers which are typically large businesses. However, we expect that SaMBs could be affected as part of the supply chain and as service providers. Whilst no impacts are expected at primary legislation stage, there will be familiarisation and compliance costs at secondary legislation stage, which could represent a higher proportion of existing costs for SaMBs. Our initial assessment is that these costs will be small, but mitigations are considered in the full assessment in annex 2.12.

3. Wider impacts

The wider impacts section in each of the impact assessments listed in annexes 1-3 vary as impacts assessed have been selected based on their relevance to each policy. The most common across the Bill are judicial impacts, human rights impacts, distributional impacts, equality impacts and competition impacts. A detailed assessment is provided in annexes 1-3 and a summary of equalities impacts is outlined below.

3.1 Equalities impacts

The Public Sector Equality Duty (PSED) under the Equality Act (2010) requires public authorities and others to carry out public functions to have due regard to:

1. Eliminate unlawful discrimination, harassment, victimisation and any other conduct prohibited by the Equality Act 2010
2. Advance equality of opportunity between people who share a protected characteristic and people who do not share it
3. Foster good relations between people who share a protected characteristic and those who do not

The equalities impacts across the bill are varied. A summary of the equalities assessments is provided in each of the impact assessments listed in annexes 1-3. There are eight measures which have impacts from the primary legislation and the equalities impacts of these measures are summarised below. Most measures will only have impacts after secondary legislation and any equalities impacts will be reviewed ahead of the final stage impact assessments for secondary legislation.

Analysis of equalities impacts of measures that have primary legislation impacts

- **CO_2 transport and storage regulatory investment (TRI)** (annex 1.1) – The primary legislation alone is not expected to have any impact on different protected characteristics groups.
- **Hydrogen heating village trial** (annex 1.3) – Proposed changes to the legislation will not directly disadvantage participants due to any protected characteristics they may have. While we cannot rule out the possibility that powers of entry may need to be exercised more frequently upon certain groups, the Gas Distribution Networks will be required, under the overall trial framework and reinforced by secondary powers, to exercise appropriate duty of care for each consumer within the trial area, which should address any variation in engagement needs between different groups.
- **Special merger regime for energy network companies** (annex 2.1) – There will be very minimal direct impact on individuals and the analysis does not indicate there are equality issues to address.

- **Energy industry code reform** (annex 2.2) – We expect there will be no impact on any protected characteristic from this measure.
- **Multi-purpose interconnectors** (annex 2.3) – The introduction of multi-purpose interconnectors as a distinct licensable activity does not have any equalities impacts. Any disproportionate impacts from individual projects would be expected to be mitigated through local planning and consenting processes.
- **Defining electricity storage** (annex 2.4) – We expect there will be no impact on any protected characteristic from this measure.
- **Final stages of nuclear decommissioning** (annex 3.2) – This measure is not expected to have any differential impacts on any of the protected characteristics groups.
- **Downstream oil resilience** (annex 3.3) – There are no anticipated impacts on any protected characteristics from this measure.

4. Monitoring & evaluation

Monitoring & evaluation (M&E) plans are not uniform across the Bill. This is because the policies within the Bill have a wide range of objectives, metrics to evaluate these objectives, stakeholders, and external factors which may impact the success of the policy. Instead, a bespoke and proportionate approach is being taken to the M&E plan of each policy in the Bill, to tailor to individual policy requirements. M&E plans specific to each policy is presented in the impact assessments listed in annexes 1-3 and a summary of M&E plans of policies that have impacts from primary legislation is provided below.

M&E summaries of measures that have primary legislation impacts

- **CO_2 transport and storage regulatory investment (TRI)** (annex 1.1) – A M&E plan will be devised in full detail alongside the implementation of the regulatory framework, following finalisation of the T&S business model, the outcomes of CCUS cluster sequencing process and the enactment of any secondary legislation.
- **Hydrogen heating village trial** (annex 1.3) – Government will monitor any instances where the additional powers of entry need to be used, working with the Gas Distribution Network Operators (GDNs) to ensure that they are being used proportionately while fulfilling their intended purpose. Should Government become aware of any unforeseen instances where powers of entry are being used disproportionately, it will take action to ensure that such instances are prevented in future, including through the Secretary of State's new powers to make regulations by Statutory Instrument.
- **Special merger regime for energy network companies** (annex 2.1) – A post implementation review (PIR) will be carried out after five years following a proportionate approach, involving establishing whether there have been any attempted mergers in energy networks over that five-year period. To inform this PIR, BEIS may collect evidence from stakeholders, such as the CMA, Ofgem and network companies, to find out how this policy has been implemented into their processes and the effect it has had on how they operate.
- **Energy industry code reform** (annex 2.2) – To provide a full understanding of policy intervention, it is deemed proportionate to carry out two evaluations: a lighter-touch process evaluation at the time of implementation, followed by a value-for-money performance evaluation 5 years following implementation, when it is expected there will be sufficient experience of the new governance arrangements to assess their performance and desirability.
- **Multi-purpose interconnectors (MPIs)** (annex 2.3) – Given the relatively small number of MPI projects in development currently, it is envisaged BEIS will continue engagement with all relevant stakeholders to understand the impact of introducing MPIs as a new licensable activity. At present it is still premature to develop detailed M&E plans for MPIs policies because the full regulatory framework is not yet complete.

- **Defining electricity storage** (annex 2.4) – M&E will be carried out informally via stakeholder feedback to BEIS and our Smart Systems and Flexibility Monitoring Plan. Both will enable the impact of policy intervention to be considered holistically against the range of other measures we are taking.
- **Final stages of nuclear decommissioning** (annex 3.2) – The proposed Decommissioning Exclusion Regulations and the new delicensing procedures are not expected to be used on any significant scale until 2032. The first evaluation review of these regulations will take place around 10-12 years after they come into effect. Monitoring data will be annually reported to BEIS by the Office for Nuclear Regulation (ONR) on the number of successful applications for the Decommissioning Exclusion and delicensing. Estimated excavation and transport savings will be monitored by BEIS as licensees of successful applications for permits to dispose of material on-site report annually. BEIS will also monitor the impact of the LLW Exclusion, it is expected that the exclusion will be used within 1-2 years of implementation, resulting in savings to operators of the relevant sites. Evaluation activities to review the LLW Exclusion will be carried out five years after implementation, in line with the expectations set out in the Small Business, Enterprise and Employment Act 2015.
- **Downstream oil resilience** (annex 3.3) – It is difficult to assess clear data points that will demonstrate that the changes in this policy are working as it is focused on reducing the impact of extreme events. BEIS will continue to communicate with industry to understand changes to their risk assessments due to these policy changes and whether this might flow through directly or indirectly to the market. BEIS will undertake a post-implementation review of the policy in five years' time if sufficient market events have warranted it.

Annexes

Annex 1: Impact assessments under pillar 1 ‘facilitating investment in new technologies’

- Annex 1.1: CO_2 transport and storage regulatory investment (TRI) impact assessment
- Annex 1.2: Fusion regulation impact assessment
- Annex 1.3: Hydrogen heating village trial impact assessment
- Annex 1.4: Hydrogen and industrial carbon capture (ICC) business model impact assessment
- Annex 1.5: Hydrogen levy impact assessment
- Annex 1.6: Clean heat market mechanism impact assessment

Annex 2: Impact assessments under pillar 2 ‘system reform and consumer protection’

- Annex 2.1: Special mergers regime impact assessment
- Annex 2.2: Energy industry code reform impact assessment
- Annex 2.3: Multi-purpose interconnectors impact assessment
- Annex 2.4: Defining electricity storage impact assessment
- Annex 2.5: Smart metering rollout impact assessment
- Annex 2.6: Future system operator impact assessment
- Annex 2.7: Smart secure electricity systems impact assessment
- Annex 2.8: Smart heat pumps impact assessment
- Annex 2.9: Heat network zoning impact assessment
- Annex 2.10: Heat network market framework impact assessment
- Annex 2.11: Energy company obligation (ECO) buyout mechanism impact assessment
- Annex 2.12: Smart appliances impact assessment
- Annex 2.13: Onshore electricity network competition impact assessment
- Annex 2.14: Smart chargepoints impact assessment
- Annex 2.15: Energy performance of buildings impact assessment
- Annex 2.16: Extension of the default energy tariff price cap impact assessment

Annex 3: Impact assessments under pillar 3 ‘safety and security’

- Annex 3.1: Accession to the Convention on Supplementary Compensation (CSC) for nuclear damage impact assessment

- Annex 3.2: Final stages of nuclear decommissioning impact assessment
- Annex 3.3: Downstream oil resilience impact assessment
- Annex 3.4: Oil and Gas Authority (OGA) ex ante powers impact assessment
- Annex 3.5: Application to the territorial sea of requirement for nuclear site licence impact assessment
- Annex 3.6: Offshore oil & gas (habitats assessment and emergency pollution planning & response) impact assessment
- Annex 3.7: Offshore oil & gas decommissioning cost recovery impact assessment
- Annex 3.8: Civil nuclear constabulary (CNC) impact assessment

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