Proportionate Analysis – Financial Support for Nuclear Lifetime Extensions

Title:	Financial Support for Nuclear Lifetime Extensions
Type of measure:	Secondary Legislation
Department or agency:	Department for Energy Security and Net Zero
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1. Summary of proposal

Nuclear generation plays a key role in the UK's energy mix, supplying baseload, low-carbon electricity to millions of homes and businesses. The continuation of this supply to the system is critical to ensuring that the UK can meet its Net Zero commitments while lowering system costs, supporting our energy security.

As the UK looks ahead to the additional supply from new nuclear projects, such as Hinkley Point C (HPC) and Sizewell C (SZC), it is important that existing generation can be maintained wherever it is feasible and safe to do so. International best practice shows that, in many cases, eligible operational nuclear plants can continue operating beyond their initially anticipated lifetime with appropriate investment.

Given the changing electricity market over coming decades, there may be circumstances where it is necessary for HMG to provide support to enable lifetime extensions of operating nuclear plants. Capitalising on existing infrastructure and operating nuclear assets in this way can deliver value for money for consumers and benefits to the supply chain, as well as maintaining a skilled workforce.

This document explores the impacts of amending the CfD legislation to enable existing nuclear generating assets to be eligible for CfDs as a way of incentivising investment into lifetime extensions of operating nuclear plants. This analysis of impacts follows the consultation on financial support for nuclear lifetime extensions which was launched on 10 December 2025[1] and followed by a government response on 05 March 2026.[2] The proposed legislative amendment provides the Government with the option to offer a CfD to

[1] Consultation on financial support for nuclear lifetime extensions (GOV.UK)
[2] Financial support for nuclear lifetime extensions: government response to consultation (GOV.UK)

incentivise nuclear life extension where appropriate, rather than to mandate intervention or prescribe this as the sole approach.

2. Strategic case for proposed regulation

Aligned with the Clean Power 2030 Action Plan[3], a large majority of future power generation will come from renewable sources. However, analysis demonstrates that low-carbon technologies such as nuclear are required in tandem to lower the overall cost of the electricity system.[4]

Whilst capital costs for new nuclear projects tend to be higher than for alternative energy sources, nuclear generation provides proven system benefits through inertia, frequency stability and firm dispatchable output. As shown by other examples across the world, extending the lifetime of an existing nuclear plant are lower than the comparative costs of new build plants.

There is a strong case for HMG to support nuclear power to overcome persistent market failures. Large-scale nuclear power plants have characteristics that mean the market is likely to underinvest in them, relative to their value to society, without government intervention. Specific market failures underpin why HMG intervention is necessary to support large-scale nuclear capacity in the UK:

i. **Low-carbon electricity/power supply:** Nuclear power is commonly understood to have lower lifetime emissions than alternative low-carbon sources. Carbon emissions represent a negative externality. As fossil fuel generators do not face the full costs of their emissions, investors are not fully incentivised to invest in low-carbon generation.

ii. **Energy security and acting as a source of reliable electricity:** Nuclear power plants produce ‘firm power’ that is not dependent on the weather. This complements intermittent renewables and provides reliable baseload generation to help ensure security of low-carbon electricity supply. Security of energy supply is a public good, and investors are not sufficiently incentivised to deliver it on their own. The market, left to itself, is likely to undervalue this benefit as wholesale electricity prices do not fully value security of supply.

iii. **Developing a domestic nuclear supply chain:** There are a range of positive externalities from maintaining nuclear technology. Life extensions within the UK will help maintain our nuclear supply chain and skills base, helping to derisk anticipated future nuclear projects whilst lowering the likelihood of schedule and cost overruns. This creates an option value, by increasing the number of viable generation mixes that keep the energy system on a trajectory to deliver Net Zero at low-cost. There are also wider benefits from developing nuclear power, including the value of a skilled nuclear workforce and supply chain to other sectors such as defence and healthcare.

[3] Clean Power 2030 Action Plan (GOV.UK)
[4] Modelling 2050: Electricity Systems Analysis (GOV.UK)

If all the existing nuclear power plants in the UK are decommissioned in line with current expectations, 5.9GW of current nuclear capacity will be offline by 2035. Given the system wide benefits of nuclear, there is a strong value for money case to extend the life of existing assets where possible.

There are international examples of government intervention in the extension of nuclear power plants. For example, in February 2025, the EU Commission confirmed that the Contract for Difference (CfD) agreed by the Belgian Government to support the extension of two nuclear plants in Belgium was appropriate and proportionate within EU State Aid rules.[5]

Against this background, HMG is introducing secondary legislation to enable the use of CfDs to support the lifetime extension of operational nuclear power plants. The CfD scheme is an established form of support for low carbon generation in the UK. Nuclear electricity generation is already eligible for support under the CfD Scheme for new-build capacity (for example, a CfD was used to provide financial support for the construction of Hinkley Point C) [6], as well as for projects that increase the generating capacity of an existing station by 5 MW or more. This legislative amendment would expand the eligibility criteria to allow nuclear plants undertaking refurbishment to extend their operational lifetimes to be offered financial support through a CfD.

3. SMART objectives for intervention

The objectives set out below are intended to assess the potential impacts of enabling nuclear lifetime extensions through legislative change. The proposed legislation is enabling rather than prescriptive: it provides the Government with an additional option to support nuclear lifetime extensions where this represents the most effective means of meeting energy and decarbonisation objectives. It does not mandate intervention, nor does it require nuclear lifetime extensions to be pursued in all circumstances. The objectives therefore consider the benefits of this option relative to the counterfactual, while preserving Government discretion over whether and how any support mechanism is used.

1. **Deliver clean, stable power to the UK electricity system.** Nuclear provides firm low-carbon capacity. Extending nuclear will therefore support the Clean Power Mission's acceleration to Net Zero 2050 and energy security

2. **Delivering Value for Money and minimising impact on consumers:** If nuclear plants are not extended, other low-carbon technologies would need to be deployed and paid for. Any options for extending nuclear plants should ensure VfM, supporting HMG's aim to lower electricity system costs and minimise impacts on consumers**.**

3. **Strengthening UK nuclear industry capability whilst enabling growth in the wider sector.** Extending nuclear plants will help retain and train the nuclear workforce, supporting the ongoing nuclear supply chain throughout the UK. This will support synergies with the advanced nuclear sector, nuclear research and strategic defence nuclear supply chain.

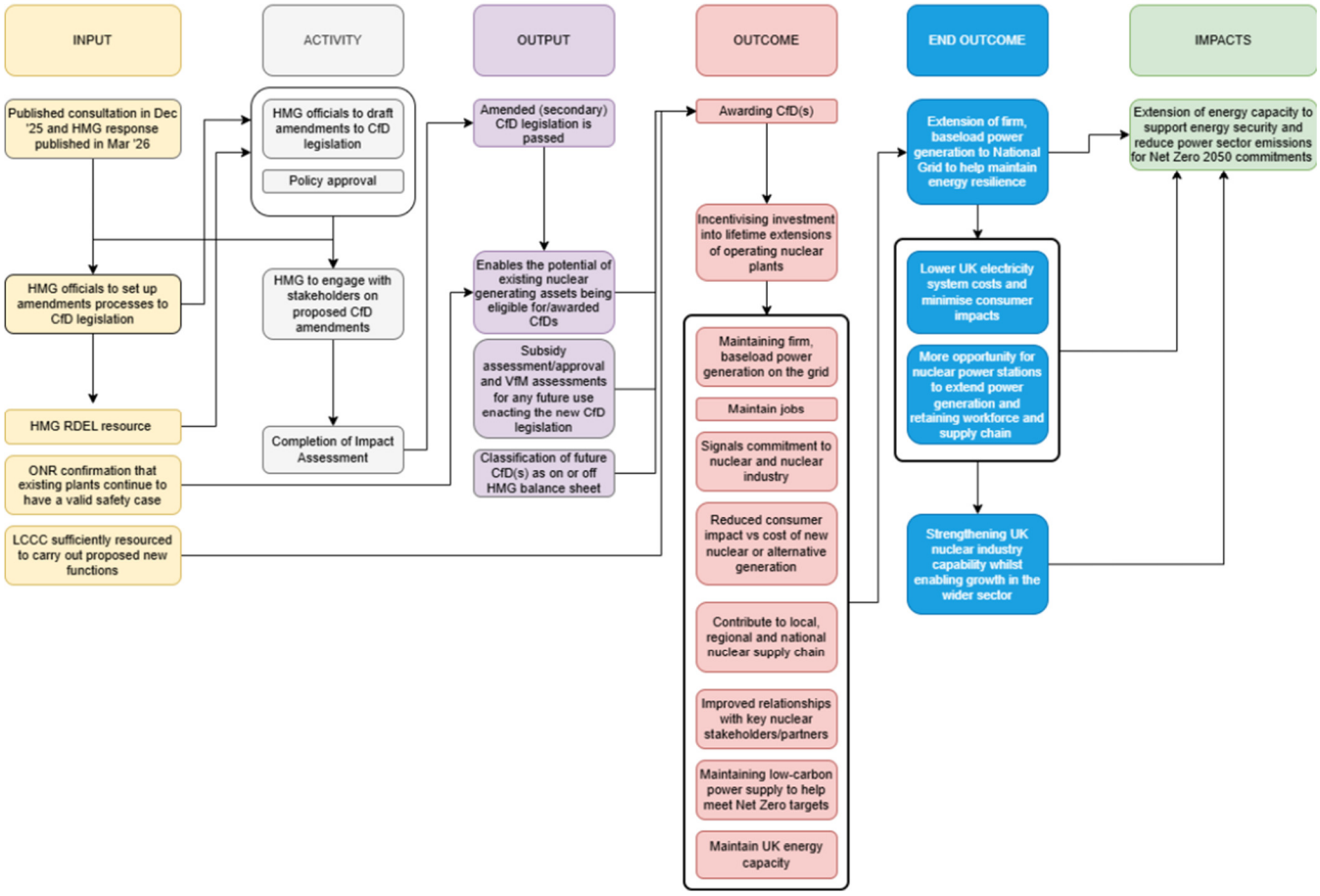
[5] European Commission: Commission approves Belgian State aid measure to support lifetime extension of two nuclear reactors (2025)
[6] Hinkley Point C: Contractual Documents (2016)

4. Description of proposed intervention and explanation of the logical change process whereby this achieves SMART objectives

The preferred option amends the definition of 'carry out an eligible generating activity' in the Contracts for Difference (CfD) legislation so that the continuation of electricity generation by an operational nuclear power station, delivered through a life extension project, can be supported by a CfD. This is an enabling measure: it expands eligibility and provides Government with an additional tool to use where it represents the most effective approach, but it does not mandate intervention or require lifetime extensions to proceed in all circumstances.

Overall, the preferred option enables Government to offer a CfD to an operational nuclear power station undertaking a life extension project, reducing revenue uncertainty and supporting investment in refurbishment so that firm low-carbon generation can be retained on the system where it is safe, feasible and value for money. This would contribute to the UK's clean power and energy security ambitions as well as using a proven support mechanism. In the case that a CfD is awarded, any impact will be subject to value for money assessment to minimise consumer bill impacts and help sustain UK nuclear skills and supply chains with wider benefits for the sector.

Figure 1: Financial support for nuclear lifetime extension theory of change



5. Description of policy options carried forward

The following list of options has been prepared for the intervention:

1. Option 1 (Counterfactual): HMG does not make legislative amendments to achieve the policy objectives. Under this option, nuclear plants will either enter decommissioning in accordance with expected timelines or support lifetime extensions through revenues generated from wholesale markets and Capacity Market payments. They could also agree PPAs with third parties.

2. Option 2 (Preferred way forward): Amend definition of 'carry out an eligible generating activity' in the Contract for Difference legislation to include continuation of electricity generation by a nuclear power station by way of life extension project.

Option 1 (the counterfactual) was discounted as it does not meet the SMART objectives. Under this scenario, nuclear generators are unable to secure a lifetime extension through a CfD, which could lead to fewer life extensions if plants aren't sufficiently incentivised to extend (e.g. due to uncertainty in future commercial viability as HMG aims for lower future wholesale prices). This would lead to lower diversification of the electricity system and increased reliance on alternative forms of low-carbon generation to meet the UK's clean power targets and maintain energy security. HMG will maintain the option to intervene through existing support mechanisms but these are likely to be less targeted to achieving the policy objectives, offering lower investor and consumer certainty.

Option 2 is the preferred option as it provides the Government with the ability to award a CfD to nuclear generators to support a lifetime extension. Crucially, this approach enables, rather than mandates, intervention and allows the Government to retain discretion over whether, and on what terms, a CfD is awarded.

6. Regulatory scorecard for preferred option

Part A: Overall and stakeholder impacts

(1) Overall impacts on total welfare		**Directional rating**
Description of overall expected impact	The overall impact of this measure on total welfare is driven by the positive impact of mitigating net zero delivery risk, and improving security of supply and maintaining a nuclear skills base against the negative impacts of familiarisation costs and uncertainty of bill impacts (which depend on the size of the CfD strike price and future wholesale prices). Extending a nuclear plant with a CfD could reduce the cost of the electricity system compared to an alternative net zero compliant technology mix. The impact on consumers will	**Uncertain** **Based on all impacts (incl. non-monetised)**

	depend on the agreed strike price, as a CfD would add a levy payment to consumer bills when the strike price is higher than the wholesale price.	
Monetised impacts	All monetised impacts are covered in section 2. The main impact is cost to businesses arising from familiarisation with the new legislation While wider benefits may arise if life extensions are realised, these are secondary impacts and are not directly reflected in the legislation's NPSV. Any individual arrangement will be subject to, and only progressed forward, following a full value for money assessment.	**Negative** **Based on likely £NPSV**
Non-monetised impacts	Mitigating net zero delivery risk: There is broad consensus that a balance of firm, intermittent and flexible generation is required for a low-cost, low emission power sector. For example, NESO model 11-22GW of nuclear by 2050 in their FES 2025 scenarios, with lower scenarios relying far more on Hydrogen deployment. If a nuclear plant is awarded with a CfD for a life extension, this will secure and maintain low carbon capacity in the electricity system. This would help mitigate the delivery risk of needing to deploy other low carbon technologies at ambitious capacity levels in order to meet the UK's net zero obligations. Aiming to deploy a variety of technologies that provide low carbon power can help reduce delivery risk. Security of supply: Nuclear power provides security of supply benefits. Nuclear power plants produce 'firm power' that is not dependent on the weather, ensuring the market benefits from a secure, low-carbon electricity supply. Without this baseload generation, the potential for blackouts, the need for management of energy supply, and greater reliance on interconnectors increases. Extending nuclear plants will therefore lead to security of supply benefits and a potential reduction in system costs (the impact on businesses and households is covered in the following sections). This is a secondary impact, as the extension itself will need to be realised.	**Positive**
Any significant or adverse distributional impacts?	All distributional impacts are covered in section 2 and 3.	**Uncertain**

(2) Expected impacts on businesses

<table>
<tr><td>Description of overall business impact</td><td>The overall impact on businesses is negative. This is due to the main monetised impacts being the cost of familiarising with the legislation and non-monetised bill impacts (as a secondary impact in the event a CfD is agreed). Familiarisation costs are expected to be disproportionately distributed to the nuclear sector.</td><td>Negative</td></tr>
<tr><td>Monetised impacts</td><td>Costs: £68,000 (familiarisation costs)
Benefits: No monetised benefits

Businesses working on nuclear or in the relevant supply chain may want to familiarise themselves with the new regulations that apply to nuclear power plants. We expect it would be of particular interest to businesses that own relevant nuclear power plants that could be extended with a CfD. This would lead to familiarisation costs, based on the time taken for relevant employees to read and understand the legislation. This is a direct impact, although it is important to note that businesses are not required or obligated to familiarise themselves with the legislation.

We have limited data to inform the number of parties that might be interested in familiarising themselves with the legislation and limited evidence to inform the estimate of time taken to read and understand the legislation. Due to this uncertainty a range of familiarisation costs have been quantified. These costs range from £136 to £954,000 with a central value of £68,000 (2025 prices, 2026 PV). See evidence base for more detail.

Table 2: Higher, upper and lower estimates of familiarisation costs associated with legislation (2025 prices, 3 s.f)
<table><tr><td colspan="2" rowspan="2"></td><td colspan="3">Days needed to familiarise with legislation</td></tr><tr><td>0.25 (Low)</td><td>0.5 (Central)</td><td>1 (High)</td></tr><tr><td rowspan="3">Interested Parties</td><td>Low (2)</td><td>136</td><td>273</td><td>545</td></tr><tr><td>Central (500)</td><td>34,000</td><td>68,000</td><td>136,000</td></tr><tr><td>High (3500)</td><td>238,000</td><td>477,000</td><td>954,000</td></tr></table></td><td>Negative

Based on likely business £NPV</td></tr>
<tr><td>Non-monetised impacts</td><td>A CfD would add a levy payment to bills when the strike price is higher than the wholesale price, or will pay back to consumers if the strike price is lower than the wholesale price. The size of the impact will depend on the number of nuclear plants awarded with a CfD for life extension, how much those plants generate, the strike price, the length of the contract and future wholesale prices. This is a secondary impact, as it requires nuclear plants to be extended with a CfD for it to be</td><td>Uncertain</td></tr>
</table>

	realised. The Energy Intensive Industries (EII) exemption will apply to eligible businesses.	
Any significant or adverse distributional impacts?	Familiarisation costs will primarily impact the nuclear sector. Existing nuclear plants are dispersed across UK coastal regions and their supply chains will be located across the country. Businesses impacted by bill impacts will also be located across the country, implying regional impacts will not be concentrated in any single area.	**Uncertain**

(3) Expected impacts on households

Description of overall household impact	The overall impact on households is uncertain. This is because the main impacts are non-monetised bill impacts (as a secondary impact). Bill impacts are expected to disproportionately effect low-income groups. However, this remains uncertain as the levy impact does not account for the higher bill impacts arising from higher systems costs in the counterfactual, and the legislation will not directly lead to life extensions tied to CfDs.	**Uncertain**
Monetised impacts	There are no monetised impacts.	**Uncertain** **Based on likely household £NPV**
Non-monetised impacts	A CfD would add a levy payment to consumer bills when the strike price is higher than the wholesale price, or will pay back to consumers if the strike price is lower than the wholesale price. The size of the impact will depend on the number of nuclear plants awarded with a CfD for life extension, how much those plants generate, the strike price, the length of the contract and future wholesale prices. This is a secondary impact, as it requires nuclear plants to be extended with a CfD for it to be realised. However, extending a nuclear plant with a CfD could reduce the cost of the electricity system compared to an alternative net zero compliant technology mix	**Uncertain**
Any significant or adverse distributional impacts?	This legislation is not expected to have any direct disproportionate impacts on any groups with protected characteristics, however if a nuclear plant is awarded with a CfD for lifetime extension purposes, there may be some secondary impacts: i. Low income: If the legislation leads to nuclear lifetime extensions tied to a CfD, any increases to bills will disproportionately impact lower income groups, given that energy bills comprise a greater portion of household expenditure compared to middle or higher-income households.	**Uncertain**

	ii. Disability and race: Disability groups and ethnic minorities are disproportionately represented in lower income groups so will be disproportionately impacted by consumer bill increases. iii. Pregnant / maternity leave groups: Any increase in consumer electricity bills could particularly impact people on unpaid maternity leave or who are unable to work due to pregnancy.	

Part B: Impacts on wider government priorities

Category	Description of impact	Directional rating
Business environment: **Does the measure impact on the ease of doing business in the UK?**	This measure is not expected to have an impact on the ease of doing business in the UK.	**Neutral**
International Considerations: **Does the measure support international trade and investment?**	This measure is not expected to impact international trade and investment.	**Neutral**
Natural capital and Decarbonisation: **Does the measure support commitments to improve the environment and decarbonise?**	This measure will have a positive impact on decarbonisation. Nuclear power is commonly understood to have lower lifetime emissions than alternative low carbon sources. [7] We also expect any wider natural capital and environmental impacts to be relatively smaller for nuclear plant extension compared to new builds.	**Supports**

7. Monitoring and evaluation of preferred option

The post-implementation review (PIR) for this measure is expected to take place five years after implementation. This timeframe is intended to allow sufficient opportunity for the enabling legislation to be used, if Government chooses to award a CfD for a nuclear lifetime extension, and for evidence to be gathered on how the measure has operated in practice. As this legislation is enabling rather than prescriptive, it is possible that no power station will have been awarded a CfD under this measure by the time of the PIR; in that case, the PIR

[7] Carbon Neutrality in the UNECE Region: Integrated Life-cycle Assessment

would focus on implementation and use of the power, including any decisions not to use it, and on whether any amendments are required to ensure the measure remains fit for purpose.

If a nuclear power station is awarded a CfD for lifetime extension purposes, monitoring information on delivery and operation would be expected to be provided primarily by the generator, drawing on existing operational reporting and assurance arrangements, and on the contractual reporting requirements set out in the CfD. Government would use this information to assess whether the measure is operating as intended, alongside other relevant evidence on electricity market conditions and system outcomes.

Regarding CfD metrics, the Low Carbon Contracts Company (LCCC) monitors CfD projects and this monitoring process would apply to any nuclear project awarded a CfD under this measure. Monitoring and reporting requirements would be set out in the CfD contract and would typically include operational, metering and performance information, and reporting for audit and assurance purposes. As this measure does not change the CfD mechanism itself, the core monitoring approach would follow existing CfD arrangements; however, where a lifetime extension CfD is not in standard form, any additional data requirements needed for monitoring and evaluation could be specified through the contractual terms, subject to agreement.

Given the enabling nature of the legislation and the limited direct costs identified in this IA, monitoring will be proportionate. At a minimum, we would track whether the power has been used and, if so, the number of CfDs awarded for nuclear lifetime extensions. Where a CfD is awarded, we would also expect to monitor a small set of additional indicators that are most relevant to assessing delivery against the objectives. This could include headline contract value and key terms and the extent to which generation is delivered as expected, drawing primarily on information collected through the CfD contract and existing governance arrangements.

External factors that could influence outcomes include: (1) political and public support for nuclear and for the use of revenue stabilisation mechanisms; (2) the ongoing availability of the skills, supply chain capability and regulatory permissions needed to undertake and operate lifetime extensions safely; and (3) electricity market conditions and the extent to which a CfD could be negotiated on terms that are acceptable to both the generator and Government and represent value for money for consumers. These factors are uncertain and will vary by project; the legislation itself provides the power to award a CfD but does not predetermine whether, or on what terms, it will be used.

We expect the PIR to draw on information from any organisations that have used the measure, supplemented as appropriate by wider stakeholder engagement. This may include a short survey and, where proportionate, follow-up interviews to understand implementation experience and outcomes. The PIR would assess the extent to which the measure has supported delivery of the objectives and whether any changes are needed.

- To what extent has the measure been used to award CfDs for nuclear lifetime extensions, and on how many occasions?
- Where used, to what extent did the measure support operators to secure a lifetime extension (including through reducing revenue uncertainty) and contribute towards the policy objectives?

- Were there any unintended consequences (positive or negative) associated with use of the measure, including for consumers, businesses and households?
- What (if any) changes to the legislation or its implementation would improve effectiveness, proportionality and value for money?

Evidence for the PIR would primarily be drawn from CfD contractual reporting (where the measure is used), implementation records (including any decisions not to use the power), and engagement with relevant stakeholders. The PIR will focus on this specific legislation and the changes it makes; it is not intended to evaluate the wider performance of the CfD scheme for non-nuclear projects.

8. Minimising administrative and compliance costs for preferred option

There is likely to be a one-off familiarisation cost incurred by businesses that want to familiarise themselves with the new legislation (see section 6.2). This is not an obligation of the legislation and HMG is not obligated to extend nuclear power plants with a CfD therefore there are no other immediate administrative or compliance costs.

Summary: Analysis and evidence

Price base year: 2025

PV base year: 2026

This table may be reformatted provided the side-by-side comparison of options is retained	**1. Business as usual (baseline)**	**3. Preferred way forward (if not do-minimum)**
Net present social value (with brief description, including ranges, of individual costs and benefits)	Not estimated	-£68,000 (one-off cost of familiarising with the legislation)
Significant un-quantified benefits and costs (description, with scale where possible) This is also reflected in section 6, the regulatory impacts scorecard.	…	1. **Mitigating Net Zero delivery risk:** Maintaining low-carbon firm capacity reduces reliance on the large-scale deployment of alternative low-carbon technologies, supporting a more deliverable pathway to Net Zero. 2. **Security of supply:** nuclear provides weather-independent baseload ("firm power"), reducing risks associated with a more intermittent system (e.g., greater need for balancing actions, reduced blackout risk, less reliance on interconnectors), with potential wider system cost reductions. 3. **Decarbonisation benefit:** Extending existing nuclear generation supports decarbonisation because nuclear has low lifecycle emissions and (relative to new build) smaller additional environmental/natural capital impacts. 4. **Supply chain and skills:** lifetime extensions help sustain the UK nuclear supply chain and skills base, which can de-risk future nuclear projects and create spillovers to other sectors.

Evidence base

Cost Assumptions

The monetised impacts are limited to a one-off familiarisation cost, estimated at £68,000 (2025 prices, 2026 PV). This estimate is based two assumptions regarding the number of affected stakeholders and the time required for them to familiarise themselves with the legislation. This captures nuclear generators and relevant parts of the supply chain that are expected to be directly affected by the legislation.

There are not expected to be any direct costs to businesses due to this legislation. Companies working on nuclear or in the relevant supply chain may want to read about how amendments to exiting legislation which would lead to familiarisation costs, but this is not an obligation of the legislation and does not immediately affect any business.

We have limited evidence to inform the estimate of time taken to read and understand the legislation. However, simply assuming a reading speed of 200 words per minute, 500 words per page and the legislation being around two pages long, it would take around 5 minutes to read the legislative amendment. Given uncertainty in estimating the time to review and understand the legislation we are going to allow 0.5 days as a conservative central assumption (and 0.25 days and 1 days as lower and upper bounds). We assume 500 interested parties, reflecting the lower-bound estimate of businesses operating in the nuclear sector based on ONS LCREE data.[8] This is considered appropriate as lifetime extensions affect only a subset of nuclear stakeholders rather than the sector as a whole. The upper estimate used in the analysis reflects the ONS central estimate of the number of businesses in the nuclear sector. At the lower end, a minimal impact scenario assumes that only EDF and Centrica would need to familiarise themselves with the legislation, reflecting EDF's ownership of the UK's existing nuclear power stations. Assuming one manager reviews the legislation, wage estimates from ONS annual survey of hours and earnings suggests a gross median weekly wage of £1,092 (nominal). Non-wage costs are accounted for with a 24.8% uplift.[9] This estimates a total weekly wage of £1,363, which is used to inform the total familiarisation cost.

Nuclear capacity in future Net Zero pathways

There is broad analytical consensus, given current understanding of the challenges facing the future power system and uncertainty around how technologies will develop and deploy, that some further nuclear capacity is needed alongside both intermittent renewable and flexible capacity to ensure a secure power supply in the drive to net zero. The optimal balance between the different elements of the power sector is dependent on future demand, relative costs across technologies and deliverability of different technologies. There is clearly uncertainty surrounding how these factors will change and evolve over time.

[8] Low carbon and renewable energy economy estimates - Office for National Statistics (2026).
[9] Eurostat: EU hourly labour costs ranged from €12 to €57 in 2025 (2025).

Whilst all UK nuclear plants are set to decommission by 2035 and there is only 6.4GW of new nuclear currently under construction, analytical scenarios broadly have nuclear capacity in the range of 11-22GW in 2050. These are based on differing levels of demand and capacities of renewables and nascent technologies. For example, NESO model 11-22GW of nuclear in their FES 2025 scenarios, with lower scenarios relying far more on Hydrogen deployment.[10]

[10] FES 2025. Available at: https://www.neso.energy/publications/future-energy-scenarios-fes/fes-documents