Department for
Energy Security
& Net Zero

Electricity Infrastructure Consenting in Scotland

Options Assessment

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Any enquiries regarding this publication should be sent to us at:
scottishelectricityconsenting@energysecurity.gov.uk

Contents

Summary of proposal

Reforms seek to make the process for consenting electricity infrastructure in Scotland faster, more efficient and more predictable. We will do this by consulting on the following package of reforms:

1. Introducing mandatory pre-application requirements.
2. Refining the application process.
3. Reforming the process for when a local authority objects to an application.
4. Developing procedures for consent variations.
5. Introducing fees for necessary wayleave applications.
6. Moving to a consistent statutory right of appeal process for all onshore and offshore consenting in Scotland.

Detail on the proposals can be found in the consultation document which should be read alongside the Options Assessment.

Strategic case for proposed legislation

Policy background

The devolution picture for planning and electricity infrastructure consenting in Scotland is complex. The Scottish Parliament legislates for town and country planning rules, and Scottish Ministers operate this. In the case of electricity infrastructure consenting, the UK Government remains responsible for the overall legislative framework in Scotland, in line with the general reservation of energy policy to Westminster for Great Britain.

The Electricity Act 1989 applies across Great Britain and is reserved legislation. In Scotland, the Electricity Act 1989 is used to consent all but the smallest electricity infrastructure projects, such as generating stations, electricity transmission and distribution.[1] Scottish Ministers have executive competence for consenting electricity infrastructure in Scotland (they make decisions and are responsible for operating the system), but not legislative competence.

Reforms to Scottish electricity infrastructure consenting are needed to accelerate projects in Scotland for 2030 and beyond. Delays are costly to developers and create investor uncertainty which can result in higher costs for consumers. Constraint payments to generators, paid when there is insufficient network capacity to transport the power produced, were £1.4bn per year in 2023[2] and could rise to £8bn per year (£80 per household per year) across Great Britain in the late 2020s[3] if delays to building electricity network infrastructure persists. Reform is necessary to speed up the consenting of offshore wind in Scottish waters and onshore wind in Scotland. There is over 25GW of offshore wind projects in Scottish waters in the pipeline, providing most of the potential for acceleration to meet the Government's ambition for a significant increase in offshore wind by 2030.

Electricity Networks Commissioner Nick Winser's independent June 2023 report provided recommendations for accelerating electricity transmission network deployment in Great Britain.[4] Informed by evidence from network transmission owners, industry and the Scottish Government, the report included recommendations for speeding up the electricity infrastructure planning consenting process in Scotland. The Commissioner's recommendations form the basis for wider actions the Department is taking with Ofgem, the Electricity System Operator and industry, to accelerate build timelines and reform the grid connections queue.

[1] Note this is different to England and Wales, where electricity infrastructure which falls into the Nationally Significant Infrastructure Project category is consented via the Planning Act 2008.
[2] National Grid ESO, 'Monthly Balancing Services Summary (MBSS)', 2023. https://www.nationalgrideso.com/data-portal/mbss
[3] The Department for Energy Security and Net Zero commissioned National Grid ESO to estimate constraint costs with a 3-year delay to network build. UK Government, 'Community benefits for electricity transmission network infrastructure: Government response', 2023, p.26. https://assets.publishing.service.gov.uk/media/655cda1dd03a8d000d07fe0b/community-benefits-for-electricity-transmission-network-infrastructure-govt-response.pdf,
[4] Nick Winser, 'Electricity Networks Commissioner's principal areas of recommendation', 2023. https://assets.publishing.service.gov.uk/media/64c8e96e19f5622360f3c0f0/electricity-networks-commissioner-letter-to-desnz-secretary.pdf

Rationale for intervention

Government intervention is necessary as this policy area is already governed by primary legislation, so cannot be changed in any meaningful way without amendments to that legislation. The Scottish Government has used non-statutory guidance to modernise its process as far as possible, but such guidance is, by nature, non-binding.[5] Some areas (such as changing the approach to public inquiries or charging fees) cannot be modified by non-statutory guidance. UK Government intervention is necessary as legislative competence in this area is reserved.

The overarching rationale behind government action is to make technical amendments to a system in Scotland which has not benefitted from reform to streamline the electricity infrastructure consenting process. This will help to decarbonise the power sector to correct the negative externality of emissions, to meet renewable generation targets by 2030 and beyond and increased levels of electricity demand.[6] Electricity network infrastructure projects are required across Great Britain. Reforms to electricity network consenting in Scotland are critical given the large proportion of new infrastructure that will be located there.

Review of existing legislation

The Electricity Act 1989 does not have a requirement for a Post Implementation Review. The efficacy of the Electricity Act has been subject to some other forms of scrutiny over time, such as the introduction of the Planning Act 2008 in England and Wales which removed large projects from the scope of the Electricity Act in these nations. As part of the current project, the responsible Department for Energy Security and Net Zero (DESNZ) policy team has engaged extensively with Scottish Government's Energy Consents Unit (ECU) and DESNZ's Energy Infrastructure Planning Delivery (EIPD) team to understand their qualitative feedback, and routine monitoring information, about how the Electricity Act is functioning in Scotland, and England & Wales, respectively.

[5] See, for example, Scottish Government, 'Electricity Act 1989 - sections 36 and 37: applications guidance', 2022. https://www.gov.scot/publications/good-practice-guidance-applications-under-sections-36-37-electricity-act-1989/pages/0/

[6] DESNZ Electricity Networks Strategic Framework estimated electricity demand could at least double by 2050 Total annual electricity demand could increase from 330 TWh in 2020 to between 570-770 TWh by 2050 (see Section 2.1 'Changes in electricity demand' in 'Appendix I: Electricity networks modelling'). UK Government, 'Electricity Networks Strategic Framework: Enabling a secure, net zero energy system', 2022. https://assets.publishing.service.gov.uk/media/6690f4220808eaf43b50ce41/electricity-networks-strategic-framework-report.pdf

SMART[7] objectives for intervention

Policy objective and alignment with government objectives

The overarching objective of the policy is to make the Scottish consenting system faster, more efficient, and more predictable, whilst continuing to give communities and local authorities meaningful opportunities to input. Specifically, it seeks to significantly reduce the average time it takes for large Electricity Act 1989 projects in Scotland to progress from application submission to being consented. In terms of impacts, it is expected that a reduction in the time taken by the Scottish Government to consent to electricity infrastructure projects in Scotland will generate constraint cost savings.

The objective would start to be achieved as soon as the legislation comes into force, as reformed consenting arrangements would apply to new applications for consent. For analysis purposes, we have estimated that any impacts will be felt from 2026 onwards.

Making the consenting process for electricity infrastructure in Scotland more efficient is one of the key reforms needed for faster delivery of electricity generation and facilitates the continued deployment of onshore wind, solar and offshore wind by 2030.

[7] Specific, measurable, achievable, relevant and time-bound.

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

This intervention proposes the revision of existing statutory processes, mainly as contained in the Electricity Act 1989. In developing the proposals, the policy team has drawn on existing precedents and good practice within the Planning Act 2008 and the Town and Country Planning (Scotland) Act 1997.

Preferred option

The preferred option for reform, rather than the counterfactual (business as usual) option best meets the objectives for consenting decisions for energy infrastructure in Scotland to be delivered more quickly. It will do this by creating a clearer and more user-friendly system for all those involved, which gives due opportunity for community views to be expressed at the appropriate time and is streamlined from application to decision to objection stages. Subject to consultation, this option looks to:

1. Introduce mandatory pre-application requirements with relevant stakeholder inputs, including improving the process for community engagement at an earlier, more relevant stage.
2. Refine application requirements.
3. Improve the process following a local authority objection to be more timely and allow more meaningful and appropriate evidence-gathering.
4. Improve the process for variations to consents.
5. Introduce fees for necessary wayleave applications.
6. Make appeals more consistent across onshore and offshore consents in Scotland.

Detail on these reform proposals can be found in the accompanying consultation document.

Theory of change

Table 1: Theory of change

Problem	Inputs and activities	Outputs	Outcomes	Impacts	Risks and assumptions
The electricity infrastructure process in Scotland is lengthy, with large projects typically taking 2-4 years to consent.[8] Existing statutory arrangements are not designed to deal with the high volume of large-scale generation and transmission projects expected as part of decarbonisation. The process is also unpredictable: it is hard for developers	**Inputs:** UK Government officials' time and expertise. Scottish Government officials' time and expertise. Evidence from the sector on the current process and proposals. Developers' engagement and adherence to	A new process for all stages of electricity infrastructure planning applications in Scotland. Likely delivered via: Developed policy proposals, incorporating feedback from consultation. UK Government legislation: revisions mainly to Electricity Act 1989.	The overall time it takes to consent electricity infrastructure in Scotland is significantly reduced. Applications are consented more quickly, and the process is more predictable, as: 1) Scottish communities and stakeholders can meaningfully engage in the planning process early, reducing	Energy network and generation infrastructure in Scotland is delivered more quickly. Economic benefits, including potential to minimise constraint costs on renewables in Scotland, and planning cost savings. Contributing to broader departmental objectives: Increased energy security across GB	Whether reforms will have the desired effect of speeding up the Scottish consenting process, and how much the reforms reduce delays. The scale of the impact ahead of 2030 will depend on the speed of implementation and therefore, there is a risk that if implementation is delayed, the impacts will not be realised fast enough.

[8] Scottish Government estimates.

to tell how long it might take, or where delays might appear, which may affect investment confidence. Delays in the process are also costly for developers. Particular problems include: 1) minimal requirements to consult and publicise before application, leading to community opposition late-on in the process; 2) a lack of statutory process and timescales leading to incomplete/poor applications and delayed responses; 3) lengthy and unconstructive objection and appeal processes; 4) limited ability to vary consents; 5)	proposed new approach. Electricity Networks Commissioner Nick Winser's report. **Activities:** Evidence gathering, analysis, legal research. Internal stakeholder engagement with other government departments to ensure support for plans. Informal external stakeholder engagement with key energy industry and community stakeholders. Undertaking formal engagement with stakeholder groups	Scottish Government: makes new regulations in some areas. New process likely to include (subject to consultation): 1) Mandatory pre-application requirements to consult local communities, statutory consultees and local authorities, and notify Scottish Government. 2) Clear and binding application requirements. 3) Reform of the objection process of time-consuming public inquiries to include quicker and more meaningful alternatives. A	delays due to late-stage opposition, and ensuring consenting decisions are robust. 2) Developers submit complete, high-quality applications as they have clear, binding instructions about how to do so. The application process is more efficient. 3) Any objections or appeals can be resolved quickly and fairly. 4) There is a process for deciding variations proposals. 5) Consenting teams in Scottish Govt are better resourced to deal	due to increased generation and network capacity. Move towards net zero. Emissions savings via lower constraints and more use of renewables, meeting expected increased demand for electricity from 2030 and beyond.	Communities, developers and stakeholders need to feel included in the new policy and see its benefits when operational, otherwise there is a risk of reduced acceptance. The whole infrastructure development process, from consultation to build, is much bigger than just consenting. These proposals intervene in one process stage but have less control over variables in other stages (E.g. build stage relies on supply chain being able to cope with demand.)

the inability to charge for some aspects to allow full administration cost recovery. Bigger picture: Scotland is generally a net exporter of electricity to England (due to a smaller population and rich wind power resources), and its contribution is only expected to increase.[9] It is therefore crucial that infrastructure can keep pace with these demands. Consenting delays risk the delivery of our low-carbon future goals.	via public consultation. Analysis of public responses to craft final policy proposals.	consistent approach to challenging the consenting decisions of Scottish Ministers. 4) A clear and efficient process for variations which does not require re-submitting a new application. 5) Introduction of fees for necessary wayleave applications.	with the volume of necessary wayleaves applications, via fees. Investors therefore have greater confidence and certainty that consenting decisions will be made efficiently.		These reforms bring familiarisation, implementation and earlier investment costs.

[9] National Grid ESO, 'Future Energy Scenarios', July 2022, p.160. https://www.neso.energy/document/263951/download

Summary of longlist and alternatives

Longlist policy options

In considering the approach to intervention, a longlist of options was developed. As set out above, legislation is the only possible way to make a policy change in this area. Non-regulatory options such as voluntary guidance are insufficient and in some areas these have already been achieved. Due to the urgency and persistence of delays in the consent processes, they were therefore not aligned with policy objectives.

Therefore, the two main options were business as usual or legislate when parliamentary time allows. Various approaches were considered within the bounds of these two options.

Business as usual was ruled out on the basis that it would not align with the UK Government's commitment to facilitate the delivery of electricity network projects in Scotland for 2030 onwards or support the transition to Net Zero and the decarbonisation of the energy system. The other three options were taken forward to be tested with Ministers.

Small, micro and medium business assessment of longlist options

Transmission owners do not qualify as small, micro or medium businesses. However, there may be implications for smaller renewables or storage developers. Our identification of offshore, onshore, solar and storage developers as potentially including some small businesses will be tested at consultation.

Description of shortlisted policy options carried forward

Shortlist policy options

The main criteria used when selecting a preferred option were the: a) scale of impact on the speed of consenting in Scotland, b) speed at which the proposal could implement reform in practice, c) alignment with wider devolution arrangements. The preferred option was to legislate when parliamentary time allows.

Most of the specific reform proposals satisfy the criteria for requiring an Options Assessment. The exception is a reform to give the Scottish Government the ability to charge fees for necessary wayleaves process in Scotland. Details on the package of proposed reforms can be found in the consultation document which should be read alongside the Options Assessment. The Department's recommended approach for reform is through UK Government technical amendments mainly to the Electricity Act 1989 when parliamentary time allows.

For the preferred option to legislate when parliamentary time allows on the package of reforms, we have assumed that the impact will be to reduce the length of consenting for transmission network projects in Scotland by 2 years, but this will be tested in consultation.

The analysis assumes that benefits will start to be realised from 2026 onwards.

For the preferred option to legislate when parliamentary time allows on the package of reforms, the expected impacts include:

Costs

- **Familiarisation costs (monetised)** – Transmission Owners (TOs), Distribution network operators (DNOs), offshore wind developers, onshore wind developers, solar developers and storage developers could incur time costs to familiarise themselves, understand and action the regulation. This includes time take to read the amendment and formulating plans to action it.
- **Implementation costs (monetised)** – Scottish and UK governments may incur costs to implement this policy.
- **Fees for pre-application services (non-monetised)** – If the Scottish Government is granted the power to charge fees for pre-application support to developers, such as chairing stakeholder meetings and validating pre-application information, an annual cost per application will be incurred. This cost is currently non-monetised, but we may explore doing so for the Impact Assessment.
- **Earlier network investment costs from quicker network build (monetised)** – If this policy reduces delays to network build in Scotland, network investment will occur sooner which will increase investment over the appraisal period.

- **Increased supply chain tightness from quicker network build (non-monetised)** – If this policy reduces timelines for Scottish network projects, supply chain issues may occur as demand for materials these projects is in incurred earlier.
- **Costs associated with network infrastructure being in place sooner (non-monetised)** – If this policy reduces delays to network build, communities in Scotland may face costs associated with network infrastructure such as disruption costs, noise impacts, and landscape impacts (this list is not exhaustive), sooner. These costs would still be incurred in the baseline scenario, but they may be incurred sooner if this policy reduces delays to network build.

Benefits

- **Planning cost savings for transmission networks, renewables and storage (monetised)** – If this policy reduces timelines for consent processes and increases their efficiency, it could lead to cost savings in planning.
- **Constraint cost savings (monetised)** – If this policy reduces delays to network build, this will reduce congestion on the network and reduce constraint costs, resulting in savings for electricity consumers, including businesses. This is because constraint costs are part of balancing charges, which make up a portion of electricity bills.
- **Emissions savings from lower constraints (monetised)** – If this policy reduces delays to network build and decreases network constraints, there will be emissions savings. This is because under current network constraints, renewable generation is usually curtailed (switched off) whilst non-renewable generation is usually switched on to meet demand.
- **Shorter network connection times for new low carbon generation & storage (non-monetised)** – Enabling works must be completed before a new generation asset can connect to the electricity network. If this policy reduces delays to network build in Scotland including enabling works, this could allow new low carbon generation including renewables and storage projects to connect to the network more quickly, supporting households and businesses across the country in achieving cheaper, more secure and low carbon energy generation.
- **Potential supply chain benefits (non-monetised)** – If this policy reduces delays to network build, there may be supply-chain benefits for TOs and developers if they are able to access materials sooner. Where earlier approval might give more flexibility in timelines and reduce uncertainty with investment. However, this may be slightly offset by a tightness in the supply chain with earlier demand for materials, although this is not as likely.

Costs and benefits summary

Table 2 summarises the estimated costs and benefits associated with the preferred option.

Table 2: Summary of monetised impacts (2024 prices, £ millions, discounted, 2026-2035)

	Preferred option
Costs	
Familiarisation costs	< 2
Implementation costs	<1
Earlier investment costs	400-1,100
Total Costs	400-1,100
Benefits	
Planning cost savings (Transmission networks only)[10]	2-6
Constraint cost savings	800-2,700
Emissions savings[11]	13-600
Total Benefits	800-3,300
Net present value (NPV, benefits – costs)	
NPV	+400-2,200

[10] Renewables and storage estimates for savings in planning costs are estimated for 1GW to be <£15m and £3m respectively.
[11] The large range of emissions savings reflects both the range in constraint costs, as well as the low scenario for emissions per £ of constraint costs aligning with the most ambitious Future Energy Scenarios (FES).

Table 2 summarises the costs and benefits of this policy, but it does not show who bears these costs or gains from the benefits. Therefore, table 3 is provided to show the costs and benefits of this policy to different groups.

Table 3: Groups impacted by this policy

Group	Costs	Benefits
Transmission owners and developers	Familiarisation costs – TOs, and developers may incur familiarisation costs to understand and action the regulation.	Shorter network connection times for new low carbon generation – If this policy reduces delays to network build including enabling works, this could allow new low carbon generation to connect to the network more quickly, supporting households and businesses across the country in achieving cheaper, more secure and low carbon energy generation.
Government	Policy development and implementation costs – Scottish Government and UK Government will incur implementation costs to implement this policy.	N/A
Electricity consumers	Earlier disruption and infrastructure costs – if this policy reduces delays to network build, disruption and infrastructure costs may be higher due to discounting as they occur sooner.	More efficient consent applications process – the opportunity to shape applications for consents in a more efficient, meaningful way. Electricity bill savings in the long run – if this policy reduces delays to network build, this will reduce congestion on the network and reduce constraint costs, resulting in savings for

		electricity consumers. However, if renewable generation is brought forward, these savings may not materialise.
Society	N/A	Emissions savings – if this policy reduces delays to network build, there will be emissions savings as less thermal generation will be required to meet electricity demand.

Monetised costs

Familiarisation costs

To calculate familiarisation costs, we assume 10 people per Transmission Owner, 10 people per distribution network, 5 people per offshore wind developer, 5 people per onshore wind developer and 5 people per storage developer will be required to familiarise themselves with the regulation. We assume reading and understanding and planning a response to the regulation will take 1 day (8 hours) per person. This is uncertain and requires testing with consultation.

Next, we assume a mean hourly wage for 'chief executives and senior officials' of £53.42 (2024 prices)[12] and a non-wage labour uplift of 26.5%[13] to arrive at £67.57 (2024 prices) per hour per person. We assume there are 2 Transmission Owners, 30 offshore wind suppliers, 120 onshore wind developers, 220 solar developers and 60 storage developers. This data is multiplied by the number of hours and number of people per business or organisation to arrive at the estimate outlined in table 2. We assume familiarisation costs are incurred in 2026 when the legislation comes into effect. We calculated low and high estimates by applying -50% and +50% to the central calculation respectively, to ensure the degree of uncertainty is appropriately reflected. These estimates all ranged around £1m respectively. Limitations to this approach include a lack of evidence to quantify these costs. The appropriate wage level and the number of people per business or organisation used to estimate familiarisation costs is highly uncertain.

[12] UK Government, 'Annual Survey for Hours and Earnings (AHSE), earnings and hours worked, occupation by four-digit SOC', table 14.6a, hourly pay excluding overtime, 2022, 'all' tab, https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/earningsandworkinghours/datasets/occupation4digitsoc2010ashetable14

[13] UK Government, 'TAG unit A4.1 social impact appraisal', para. 2.2.4, https://www.gov.uk/government/publications/tag-unit-a4-1-social-impact-appraisal

Implementation costs

To calculate implementation costs, we assume that when this legislation comes into effect in 2026 and 2027, for these two years 2 'Grade 6/7' and 2 'HEO/SEO' civil servants will be involved in implementing this policy. This is based on engagement with DESNZ teams and the Scottish Government.

Next, we assume a median salary of £60,670 for 'Grade 6/7' a non-wage labour uplift of 26.5%.[14] This data is multiplied by the number of people per government organisation to arrive at the estimate outlined in table 2.

Earlier network investment costs

Earlier network investment costs were calculated using transmission network investment estimates outlined in the Electricity Networks Strategic Framework (ENSF).[15] These estimates are adjusted for Scottish investment only by assuming a proportion based on the National Grid Energy System Operator's (ESO) allowed revenue split between Transmission Operators (TOs).[16] Low estimates reflect network investment required under the 'Net Zero Lower' scenario in the ENSF, whilst high estimates reflect network investment required under the 'Net Zero Higher' scenario in the ENSF. We assume there would be a 2-year delay to network build in the counterfactual scenario, then assume that with the intervention there is no delay from when earlier network investment comes into effect. Therefore, the estimate for earlier network investment is the difference between these two scenarios.

Monetised benefits

Planning cost savings

We have developed an estimate of the cost of consenting for transmission projects in discussion with the TOs in Scotland. We have assumed a proportion of this cost is saved due to the policy, this is currently 10% but this is uncertain and requires testing with consultation.

Renewables and storage projects estimates are not included in the final Net Present Value calculation, however we were able to estimate an illustrative example for 1GW of capacity.

For renewables projects, this uses data on pre-development costs (£/kW) for offshore wind and onshore wind developers, onshore wind and solar technologies.[17] We converted this to a GW figure and then multiply this by an illustrative estimate of 1GW capacity. Next, we assume a proportion of pre-development cost is pre-licensing and apply this. We also assume that a

[14] As above.
[15] UK Government, 'Electricity Networks Strategic Framework: Enabling a secure, net zero energy system', 2022. Appendix 1: Electricity Networks Modelling, Figures 8 & 9, https://www.gov.uk/government/publications/electricity-networks-strategic-framework
[16] National Energy System Operator, 'Transmission Network Use of System (TNUoS) Charges'. https://www.neso.energy/industry-information/charging/tnuos-charges
[17] UK Government, 'Electricity generation costs 2023', 2023. https://www.gov.uk/government/publications/electricity-generation-costs-2023, Annex A: Additional estimates and key assumptions (updated 16 November 2023)

proportion of this cost is saved due to the policy, this is currently 5% but this is uncertain and requires testing with consultation.

For batteries & storage projects, this uses development cost data(£/kW).[18] We converted this to a GW figure and then multiply this by an illustrative estimate of 1GW capacity. Next, we assume that a proportion of this cost is saved due to the policy, this is currently 5% but this is uncertain and requires testing with consultation.

Reduced network constraint costs

Constraint cost savings were calculated using constraint cost estimates provided by National Grid ESO. They provided data on additional constraint costs with a 1-year delay or a 3-year delay to optimal reinforcement. We applied each of these as the high scenario and the low scenario respectively, and an average of the two (i.e. 2-year delay) as the central scenario. The limitations of this sources are set out further below.

Next, we split this into to Scotland only estimates using data from National Grid ESO, multiplying constraint costs by the proportion of the share of constraints in Scotland compared to England and Wales. We assume there will be a lag between 2026 and when the lower constraint costs come into effect. The length of this lag will be the length of time between consent application and when the project comes online. Our current estimate for this lag is currently 6 years, but this policy will reduce this by 2 years as a result of time saved in the consenting process. The total constraint costs savings are the sum of these over the appraisal period of 10 years (2026-2035).

Constraint costs savings will be enjoyed by final demand users. This is because constraint costs are a component of Balancing Services Use of System (BSUoS) charges, which are recovered solely from final demand. To calculate business impacts, we apply the proportion of final demand that is businesses (~65%) to the total of constraint costs savings.

The potential limitations for constraint cost savings if a 1-year or 3-year delay is prevented – To estimate this, National Grid ESO shifted network boundary capability in their Leading the Way (LW) Future Energy Scenario (FES) back by 1 year and 3-years. This is a simplistic approach and uses different net zero scenarios to those used by the department. It assumes all generators connect as assumed in the LW scenario and they are not subject to a delay as a result of connection works being delayed. This could result in an over-estimate of constraint cost savings if a generator connecting ‘behind’ a constraint were delayed as this would mean they are not connected to the system to receive constraint payments. However, this potential over-estimate of constraint cost savings is mitigated by the fact that the benefits of shorter network connection times for new low carbon generation are unquantified. If quantified, this benefit may offset the potential over-estimate of constraint cost savings. This approach also neglects to change the boundary capabilities with changes in the generation. For example, it could be the case that the addition or removal of a generator changes the balance of power flows on circuits crossing a boundary such that the boundary capability

[18] UK Government, ‘Storage cost and technical assumptions for electricity storage technologies’, 2020. https://www.gov.uk/government/publications/storage-cost-and-technical-assumptions-for-electricity-storage-technologies

increases or decreases despite there being no physical change to the transmission assets. The constraint cost saving estimate is therefore heavily caveated, but provides an indication of the sort of effects preventing delays to network reinforcements could represent.

Emissions savings

Emissions savings were calculated using estimates of emissions due to network constraints provided by National Grid ESO. National Grid ESO provided data on emissions associated with the constraints outlined in Network Options Assessment 8 (NOA 8).[19] We used source the minimum estimate across each FES scenario[20] as the low scenario, and the maximum as the high scenario, and an average of the two as the central scenario, then calculated an average amount of emissions per £ of constraint costs (MtCO2e/£).

We multiply this by the constraint cost savings from the 'Reduced network constraints' section to estimate total emissions savings. To monetise this, we use government estimates of social carbon values,[21] but remove private carbon costs[22] to prevent double counting as these are already included in the constraint cost savings estimates.

Small and micro business scope

This proposal is not expected to have an especially high impact on small or medium sized businesses. Given the scale of investment needed for generation, transmission and storage projects consented under the Electricity Act 1989 in Scotland, the main businesses applying for electricity consents in Scotland include transmission owners, distribution network operators and developers, all of which are likely to be large businesses.

Any developers identified as a small business may incur a comparatively higher administrative and familiarisation burden. Mitigations to address this may take the form of increased stakeholder engagement and monitoring.

[19] National Energy System Operator, 'Network Options Assessment (NOA)', https://www.nationalgrideso.com/research-and-publications/network-options-assessment-noa
[20] National Energy System Operator, 'Future Energy Scenarios (FES)', https://www.nationalgrideso.com/future-energy/future-energy-scenarios-fes
[21] UK Government, 'Valuing greenhouse gas emissions in policy appraisal', 2021. Annex 1: Carbon values in £2020 prices per tonne of CO2, https://www.gov.uk/government/publications/valuing-greenhouse-gas-emissions-in-policy-appraisal
[22] National Energy System Operator, 'FES 2024 Data Workbook', tab CP2, https://www.nationalgrideso.com/document/322326/download

Regulatory scorecard for preferred option

Part A: Overall and stakeholder impacts

Table 4: Overall impacts on total welfare

(1) Overall impacts on total welfare		Directional rating
Description of overall expected impact	**Costs** Familiarisation costs – Transmission Owners (TOs), Distribution network operators (DNOs), Offshore wind developers, Onshore wind developers, solar developers and storage developers could incur time costs to familiarise themselves, understand and action the regulation. This includes time take to read the amendment and formulating plans to action it. Implementation costs – Scottish and UK government may incur costs to implement this policy. Earlier network investment costs from quicker network build – If this policy reduces delays to network build in Scotland, network investment will occur sooner which will increase investment over the appraisal period. **Benefits** Planning cost savings for Transmission networks, renewables and storage – If this policy reduces timelines for consent processes and increases their efficiency, it could lead to cost savings in planning. Constraint cost savings – If this policy reduces delays to network build, this will reduce congestion on the network and reduce constraint costs, resulting in savings for electricity consumers, including businesses. This is because constraint costs are part of balancing charges, which make up a portion of electricity bills.	Positive Based on all impacts (incl. non-monetised)

	Emissions savings from lower constraints – If this policy reduces delays to network build and decreases network constraints, there will be emissions savings. This is because renewable generation is usually curtailed (switched off) whilst non-renewable generation is usually switched on to meet demand.	
Monetised impacts	**Total £ NPSV (£ million)** £400-2,200m **Costs** Familiarisation costs:< £2m Implementation costs :< £1m Earlier network investment costs from quicker network build: £400-1,100m **Benefits** Planning cost savings: • Transmission networks: £2-6m • Renewables (illustrative 1GW): <£15m (not included in final benefits total) • Storage (illustrative 1GW): <£3m (not included in final benefits total) Constraint cost savings: £800-2,700m Emissions savings from lower constraints[23]: £13-£600m	Positive
Non-monetised impacts	**Costs** Increased supply chain tightness from quicker network build – If this policy reduces timelines for Scottish network projects, supply chain issues may occur as demand for materials these projects is in incurred earlier.	Uncertain

[23] The large range of emissions savings reflects both the range in constraint costs, as well as the low scenario for emissions per £ of constraint costs aligning with the most ambitious Future Energy Scenarios (FES).

	Costs associated with network infrastructure being in place sooner – If this policy reduces delays to network build, communities in Scotland may face costs associated with network infrastructure such as disruption costs, noise impacts, and landscape impacts (this list is not exhaustive), sooner. These costs would still be incurred in the baseline scenario, but they may be incurred sooner if this policy reduces delays to network build. **Benefits** Shorter network connection times for new low carbon generation & storage – Enabling works must be completed before a new generation asset can connect to the electricity network. If this policy reduces delays to network build in Scotland including enabling works, this could allow new low carbon generation including renewables and storage projects to connect to the network more quickly, supporting households and businesses across the country in achieving cheaper, more secure and low carbon energy generation. Potential supply chain benefits – If this policy reduces delays to network build, there may be supply-chain benefits for TOs and developers if they are able to access materials sooner.	
Any significant or adverse distributional impacts?	This policy aims to aid projects in Scotland only. It is likely that new infrastructure will primarily be hosted in rural areas to transport electricity from areas of generation to areas of demand. The demographic of rural areas in Scotland includes a higher proportion of those aged over 65.[24] These groups are therefore more likely to be impacted by effects of sooner network build and involved in community engagement elements of planning. This legislation aims to bring in community engagement at an earlier, more efficient stage, so the impact may be neutral.	Neutral

[24] Scottish Government, 'Rural Scotland Key Facts 2021', 2021, Figure 1, https://www.gov.scot/publications/rural-scotland-key-facts-2021/pages/2/

Table 5: Expected impacts on businesses

(2) Expected impacts on businesses		
Description of overall business impact	**Costs** Familiarisation costs – Transmission Owners (TOs), Distribution network operators (DNOs), Offshore wind developers, Onshore wind developers, Solar developers and Storage developers could incur time costs to familiarise themselves, understand and action the regulation. This includes time take to read the amendment and formulating plans to action it. Earlier network investment costs from quicker network build – If this policy reduces delays to network build in Scotland, network investment will occur sooner which will increase investment over the appraisal period. (This is considered as an indirect cost to business.) **Benefits** Planning cost savings for Transmission networks, renewables and storage – If this policy reduces timelines for consent processes and increases their efficiency, it could lead to cost savings in planning. Constraint cost savings – If this policy reduces delays to network build, this will reduce congestion on the network and reduce constraint costs, resulting in savings for electricity consumers, including businesses. This is because constraint costs are part of balancing charges, which make up a portion of electricity bills. (This is considered as an indirect benefit to business.)	Positive
Monetised impacts	**Business NPV (£m)** £1-4m (Direct business impacts)	Positive

	Equivalent annual net direct cost to business (**EANDCB)** £0.2-0.5m **Costs** Familiarisation costs:< £2m **Benefits** Planning cost savings: • Transmission networks: £2-6m • Renewables (illustrative 1GW): <£15m (not included in final benefits total) • Storage (illustrative 1GW): <£3m (not included in final benefits total)	Based on likely business £NPV
Non-monetised impacts	**Costs** Increased supply chain tightness from quicker network build – If this policy reduces timelines for Scottish network projects, supply chain issues may occur as demand for materials these projects is in incurred earlier. **Benefits** Shorter network connection times for new low carbon generation & storage – If this policy is successful in reducing the timeline for networks projects in Scotland including renewables and storage projects, this may result earlier connections for these.	Uncertain
Any significant or adverse distributional impacts?	This policy aims to benefits businesses and projects in Scotland. Therefore, Scottish developers and TOs will be the main groups to benefit from the introduction of this policy. Some smaller businesses' familiarisation costs may be disproportionately higher compared to larger businesses.	Neutral

Table 6: Expected impacts on households

(3) Expected impacts on households		
Description of overall household impact	While the costs of familiarisation may be absorbed by businesses in the short term, in the medium term businesses may recover these costs through consumer bills, though the impact will be small given the low total estimated cost. Reductions in network constraint costs will benefit households as savings will be passed through to bills. If this policy brought forward investment in renewables that would otherwise have occurred later, it would also bring forward their various competing impacts on bills, including on policy costs and wholesale electricity prices. The net impact on bills of this second order effect would depend on uncertain factors including future Contracts for Difference strike prices, gas prices and electricity import prices, amongst others, and has not been estimated here. **Costs** N/A **Benefits** N/A	Uncertain
Monetised impacts	N/A	Uncertain Based on likely household £NPV
Non-monetised impacts	**Costs** Costs associated with network infrastructure being in place sooner – If this policy reduces delays to network build, communities in Scotland may face costs associated with network infrastructure such as disruption costs, noise impacts, and landscape impacts (this list is not exhaustive), sooner. These costs would still be incurred in the baseline	Uncertain

	scenario, but they may be incurred sooner if this policy reduces delays to network build. **Benefits** Electricity bill savings in the long run – If this policy reduces delays to network build, this will reduce congestion on the network and reduce constraint costs. Reductions in network constraint costs will benefit households as savings will be passed through to bills. If this policy brought forward investment in renewables that would otherwise have occurred later, it would also bring forward their various competing impacts on bills, including on policy costs and wholesale electricity prices. The net impact on bills of this second order effect would depend on uncertain factors including future Contracts for Difference strike prices, gas prices and electricity import prices, amongst others, and has not been estimated here.	
Any significant or adverse distributional impacts?	This policy aims to aid projects in Scotland only. It is likely that new infrastructure will primarily be hosted in rural areas to transport electricity from areas of generation to areas of demand. The demographic of rural areas in Scotland includes a higher proportion of those aged over 65.[25] These groups are therefore more likely to be impacted by effects of sooner network build and involved in community engagement elements of planning. This legislation aims to bring in community engagement at an earlier, more efficient stage, so the impact may be neutral.	Uncertain

[25] Scottish Government, 'Rural Scotland Key Facts 2021', 2021, Figure 1, https://www.gov.scot/publications/rural-scotland-key-facts-2021/pages/2/

Part B: Impacts on wider government priorities

Table 7: 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?	We expect that this policy will improve ease of doing business in the Scotland. In particular, we expect that the market for foreign investment in renewable electricity generation will be more attractive if we can demonstrate that grid connection times will be reduced by the increased network infrastructure build that this policy will enable. Since all projects will be subject to the same regulation, we are not expecting a significant impact on market competition.	Supports
International Considerations: Does the measure support international trade and investment?	N/A	Neutral
Natural capital and Decarbonisation: Does the measure support commitments to improve the environment and decarbonise?	The policy has potential to reduce greenhouse gas emissions by enabling a greater proportion of power to be generated from renewable sources. In particular, the policy is enabling the transition to clean power by 2030 and onwards by: • reducing transmission network constraints which often lead to over-reliance on electricity generation from gas • improving grid connections of new renewable sources	Neutral

	Emissions savings are an indirect benefit of this policy, associated with reduced constraints.	

Monitoring and evaluation of preferred option

As these proposals will be implemented via primary legislation, a post implementation review is not required.

As the Scottish Government administers the consents system in Scotland, the UK Government and Scottish Government will need to work together to agree a monitoring and evaluation approach. This could include monitoring the outcomes (the average time it takes to consent a large infrastructure application from start to finish in Scotland) and the impacts (the value of constraint costs paid to Scottish electricity generators). The UK Government's usual regular stakeholder engagement processes can be used to qualitatively assess the impact of the measures on the energy industry and local authorities and communities, to understand their experiences of the new reform system, and to gather any feedback to inform further improvements.

Minimising administrative and compliance costs for preferred option

The policy seeks to make the Scottish consenting system faster, more efficient, and more predictable, while limiting the administrative burden on electricity suppliers, developers and transmission owners. If successful, the time taken for projects to progress from application submission to consent will be reduced.

The reforms aim seek to introduce community views at an earlier, more appropriate stage in the process, with a clearer system in place.

Electricity suppliers, transmission owners and developers will be given clear information regarding new regulatory obligations. This may take the form of workshops, webinars or online content to reduce the burden of familiarisation.

Affected groups will continue to be involved in discussions about the policy and have opportunities to provide feedback as a part of policy monitoring.

This publication is available from: https://energygovuk.citizenspace.com/energy-infrastructure-planning/review-of-scottish-consenting

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