



# WHY INVESTING IN ELECTRICITY TRANSMISSION INFRASTRUCTURE IS A PRIORITY FOR SCOTLAND

## INTRODUCTION

**The UK's fossil fuel power stations are old and dirty and must be replaced. Renewable energy is the cheapest form of power generation and is the only way to do so while keeping consumer bills down, reducing our reliance on imported gas and safeguarding a clean environment for future generations.**

Scotland is the UK's renewable energy powerhouse. Our winds, tides, rainfall and longer daylight hours already provide tens of thousands of jobs and billions of pounds of economic activity – but we're being held back from doing more by an electricity grid designed for fossil fuels almost a century ago.

The renewable energy industry is being honest with the people of Scotland: a net-zero carbon future which delivers cheap, reliable, clean power, jobs, investment and a future for the next generation will look different.

Wind turbines will be larger and more efficient, meaning there may be fewer of them. Homes and businesses will be connected to heat

networks, linked by hot water pipes. Industrial sites will house large batteries as well as factories, and we'll need more electric vehicle chargers, heat pumps and solar panels.

Electricity infrastructure is the enabler for a clean energy future, but is often overlooked. New power lines, pylons and substations are being built across England and Wales, and Scotland needs them too. In fact, across the UK National Grid estimates that five times more transmission lines need to be built by 2030 than have been built in the past 30 years, at a cost of more than £50 billion.

This document sets out the reasons why it's time to be upfront and honest about that.

### **New electricity transmission infrastructure in Scotland:**

- **CUTS BILLS**
- **BENEFITS EVERYONE**
- **BUILDS ENERGY SECURITY**
- **CREATES LOCAL BENEFITS**
- **REDUCES CONSTRAINT PAYMENTS**

## CUTTING BILLS

Energy bill increases since the pandemic have seen the number of Scottish households in fuel poverty rise from 25% to 35%<sup>1</sup>.

Wind farm electricity is half the price of gas generation<sup>2</sup>. In fact, during the gas price crisis in 2022 the price of gas generation rose to nine times the price of wind<sup>3</sup> – with devastating consequences for the UK's economy and society's most vulnerable households.

Increasing the production of clean power from renewables like wind and solar is the best way to cut energy bills for everyone in society. But while the deployment of cheap renewable energy generation quadrupled over the past ten years, investments in Britain's transmission grid remained flat, and have even decreased since 2017<sup>4</sup>.

We must build more power lines, pylons and substations to carry that cheap power to the people who need it – including to people in Scotland.

## BENEFITTING EVERYONE

Being connected to the national electricity grid benefits everyone, giving us all instant access to as much electricity as we need, day or night. For instance, when it's not windy in Scotland we import power from England. Importantly, spreading different types of generation across the UK - and connecting it all together with transmission lines - means everyone is able to access electricity whenever they need it, regardless of the weather where they live.

Electricity demand is set to increase by 50% in the next decade and double by mid-century so it's therefore wrong to say that Scottish households don't need more power lines, pylons and substations: we need them to ensure our lights stay on in the same way consumers elsewhere in the UK need them.

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1 <https://www.parliament.scot/chamber-and-committees/questions-and-answers/question?ref=S6W-14736>

2 UK Government Department for Business, Energy and Industrial Strategy, Electricity Generation Costs 2020

3 Carbon Brief, Record-low price for UK offshore wind is nine times cheaper than gas (July 2022)

4 Carbon Tracker, Gone with the Wind? (June 2023)

## BUILDING ENERGY SECURITY

The UK's energy supplies are currently vulnerable: we import half of the gas we use, volatile gas prices were the main cause of the unprecedented energy bills increases which rocked our economy in 2022 and we remain one of "the most gas-dependent economies in Europe"<sup>5</sup>. With abundant natural resources, Scotland's home-grown renewables can be at the heart of delivering the clean energy needed to end our reliance on imported expensive fossil fuel. To do this, we need a national electricity grid capable of transmitting more electricity where and when it is needed.

## CREATING LOCAL BENEFITS

SSEN Transmission has plans to invest £10 billion in the electricity grid in the north of Scotland, supporting more than 9,000 high value green Scottish jobs.

Electricity infrastructure also enables thousands more jobs in new and existing renewable energy projects, from wind farm technicians to civils contractors and hotel staff.

Building new power lines, pylons and substations is a big job, but fortunately we have a local supply chain with the expertise and experience needed to do so.

In addition, both Scottish transmission operators (SSEN Transmission and SP Energy Networks) are launching, or have already launched, funds which will pay tens of millions of pounds to recognise the vital role communities will play in hosting the electricity transmission infrastructure that is required to make net-zero a reality.

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<sup>5</sup> Office for Budget Responsibility, Fiscal risks and sustainability (July 2023)

## TACKLING CLIMATE CHANGE

July 2023 was the hottest on record across the world, but the wettest in the UK. Climate change is the greatest threat to the natural world and our economy – and is already affecting Scotland, with hotter summers, flooding and the migration and loss of species costing £1.7 billion every year<sup>6</sup>. If we don't tackle it now, the landscapes we value will be lost forever – and the cost to our economy will rise threefold by 2050.

Cross-party support saw the Scottish Parliament commit to 2030 and 2045 emissions reduction targets to mitigate the impacts of climate change. To do that, the whole UK needs to access Scotland's wealth of renewable energy sources, and we need more electricity transmission infrastructure to send the power we produce to the people who need it, in turn bringing income and jobs to Scotland.

In fact, Scottish Renewables research for this briefing shows every mile of overhead power line built enables renewable energy generation to displace more than 10,000 tons of CO<sub>2</sub> from the atmosphere, the equivalent of taking 7,600 cars off the road.

## CUTTING CONSTRAINT PAYMENTS

Last year Scottish households, along with those across GB, paid a total of £1.94 billion to wind farms which had to be turned off because the national electricity grid couldn't cope with the power they would have produced. Without new power lines, pylons and substations that figure could surpass £3.5 billion in 2030 – a near-£200 increase in annual electricity bills for British households.

Building more electricity transmission infrastructure will reduce those payments as well as allowing more clean power generation to connect to customers, creating jobs and bringing investment to rural Scotland.

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<sup>6</sup> What will climate change cost the UK? Risks, impacts and mitigation for the net zero transition, Grantham Research Institute on Climate Change and the Environment, London School of Economics and Political Science, 2022.

## VISUAL IMPACT AND COMMUNITY REPRESENTATION

Groups and individuals who object to the construction of power lines, pylons and substations largely do so because they do not like the way they look, and often claim to represent the views of entire communities.

Applications to build new electricity transmission infrastructure must go through Scotland's planning system, where decisions on whether new infrastructure can be built are made by elected councillors and Ministers.

And while it is inevitable electricity infrastructure will be visible, transmission companies always seek to minimise and mitigate where possible, avoiding impacts on the most sensitive landscapes.

## CONCLUSION

Electricity transmission infrastructure is at the heart of facilitating our journey to net-zero. New power lines, pylons and substations will connect green generation to our homes and businesses and transport the clean power required to decarbonise the heat and transport sectors. Investment in our electricity networks will be essential to unlock skills and training opportunities, deliver a boost to local supply chains and make progress towards net-zero by bringing even more renewables onto the grid.

Saying no to power lines, pylons and substations because of how they look holds back economic growth in the north of Scotland, slows our chance of tackling climate change for future generations and will mean burning more expensive gas, raising energy bills for everyone.