



Net Zero by Industry Delivering a secure energy grid



Our world leading 74 GW¹ renewable energy target by 2050 is achievable with proper end-to-end planning, stakeholder engagement and grid investment.

We will be able to deliver 50 GW of new wind power by 2030 (up from 13 GW today) and 24 GW of new nuclear (three times more than now) by 2050.



This will help to support our Net Zero electrification which could see electricity demand double by 2050² but we must speed up connections.

Coordination and whole system thinking is required to meet our increasing demand and avoid network constraints and energy curtailment which will ultimately limit our progress.



Even if we reach our electrification targets, we still risk renewable energy curtailment costs to peak at £2-4 billion a year around 2030³.

We must plan to manage the intermittency of renewable sources and ensure a stable supply through investment in grid enhancements and flexibility solutions.



Up to £330 billion of investment is required up to 2050⁴ to create a stable and secure electricity grid for Net Zero. Investor confidence must be a political priority.

This investment towards grid modernisation, supply chain development and resourcing can help us to overcome our challenges to deliver our Net Zero electricity grid.

¹ Powering Up Britain (DESNZ, 2023)

² Unpacking the Sixth Carbon Budget: The transition for energy (The CCC, 2020)

³ Network Options Assessment 2021/22 Refresh (National Grid, 2022)

⁴ Growing the Market for a Net Zero Energy System (BEAMA and Energy Systems Catapult, 2022)

Investment is key to getting our Net Zero electricity grid...

Upgrading the aging electrical network in the UK is a challenge that involves not only technical improvements but also regulatory changes, financial commitment, and consumer engagement. While there is no quick or easy fix, a comprehensive and collaborative approach can help to ensure a reliable, resilient, and sustainable energy grid for the future. Digitalisation plays a crucial role in this. It empowers both utilities and consumers with better data, control, and decision-making capabilities, paving the way for a more reliable and environmentally responsible energy future.

We should make no mistake – the scale of investment required to build our Net Zero grid is not business-as-usual. Government now acknowledges the dramatic transformation we need, including recognition of the supply chain as key stakeholders. With sufficient support and commitment there is scope to reshore parts of the industry supplying key products and raw materials, bringing with it local jobs. Confidence must be given back to the investment and manufacturing communities. This will aid industrial decarbonisation, the supply of lower emission industrial products and reduce the risks of supply shortages caused by global competition for materials and skills.

...But it is not the only challenge our future energy grid faces.

We need to urgently amend our planning policy and regulations which are no longer fit for purpose to meet the urgency of our Net Zero transition. Private investment will also be of limited value unless we put a war-footing focus on addressing the resourcing and skills gap which is limiting our progress.

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- **Forecasting confidence** will release the required investment in supply chain capacity.
 - **The resourcing and skills gap** seen across the energy sector requires urgent investment.
 - **Supply chain sustainability** challenges demand national policy focus and development.
 - **Digital technologies and innovations** are key enablers to the just network transition.



LEARN MORE ABOUT WHAT IT WILL TAKE TO DELIVER NET ZERO HOMES AND INFRASTRUCTURE – **VISIT OUR CENTRAL HUB**

