Electricity Networks Sector Growth Plan

Interim Report

December 2025

Contributing partners

Members

Government, Regulator, System Operator

Other partners

Members

Foreword from the Co-Chairs of the Electricity Networks Sector Growth Plan Steering Group

The UK's future energy system depends on one thing above all: the ability to upgrade and expand our electricity networks at speed. This is not just about building infrastructure, it is about creating the foundations for growth, jobs and a resilient economy powered by secure and clean energy.

This Electricity Networks Sector Growth Plan, developed jointly between Energy Networks Association (ENA) and BEAMA and their members, with support from the UK Government and input from the Welsh and Scottish Governments, builds on the great work to already understand the opportunities of network upgrades, but also the risks and blockers to progress.

For the first time in our sector, over 80 companies have come together to agree the steps we need to take to help our sector kick-start economic growth. We have come together to build on work already done, reflecting the significant growth that has already taken place in manufacturing capacity and the upgrades to increase capacity on the transmission networks.

We have also identified areas where further work is needed, such as improving workforce planning and increasing domestic manufacturing capability. Ofgem and Government will have a critical role in working with the sector to create regulatory frameworks that enable long-term investment and provide the right incentives to support the supply chain. These priorities will guide the next phase of collaboration across the sector.

Now we are scaling that ambition across the whole networks sector - across regulated networks, independent networks and their supply chain. Our goal is clear: to turn the upgrade of Britain's grid into a powerful engine for national prosperity. That means tens of thousands of skilled jobs in every region, a thriving domestic manufacturing base and a resilient supply chain ready to compete globally. It means long-term career pathways and investing in the training capacity needed to deliver the future network.

Looking ahead, the final report next summer will set out a comprehensive roadmap for delivery. It will agree a strong set of collaborative actions, provide clear timelines and accountability, and outline how industry and Government will work together to overcome the remaining barriers to growth. By then, we expect to see early evidence of progress on procurement, skills and manufacturing, and to define the next wave of measures needed to sustain momentum.

This will be the moment to turn ambition into execution at scale, ensuring Britain's electricity networks become a cornerstone of national growth for decades to come.

Cordi O'Hara OBE FEI
President,
National Grid Electricity Distribution

Phil Dingle
Director,
Future Networks, Lucy Electric

"This Interim Report is the first step in turning ambition into action. It provides a blueprint for the next phase of work that will help set priorities to upgrade Britain's electricity networks, strengthen supply chains and give businesses the confidence to invest. The progress so far shows what collaboration can achieve and points the way to building the skills and capacity needed for delivery at scale."

Lawrence Slade FEI, Chief Executive, Energy Networks Association

"We already have a productive manufacturing industry in the UK, creating good jobs rooted in local communities. This Electricity Networks Sector Growth Plan is an important first step to growing the supply chain, gathering evidence and agreeing actions that will give manufacturers the visibility and confidence to scale up their capacity. We're proud to be delivering this work with the ENA as a critical step to attracting investment to the UK in a competitive global market."

Yselkla Farmer, Chief Executive Officer, BEAMA

Foreword from Minister of State for Energy

Department for Energy Security & Net Zero

Britain stands at a pivotal moment. The scale of investment required in our electricity networks is unprecedented in modern times, but with it comes a once-in-a-generation opportunity to strengthen our industrial base and improve our energy security.

The choices we make today won't just shape the future of the networks which power our homes, communities and industries, they will create the next wave of jobs, manufacturing capability, and innovation across the UK.

It is therefore fantastic to see network companies, manufacturers, service providers, skills bodies and wider partners developing, for the first time, a shared vision for the next decade.

This is a new way of working: collaborative, industry-led, and focused on delivering growth and opportunity across all parts of the sector. It reflects the spirit of the Government's Modern Industrial Strategy and demonstrates what can be achieved when sectors take collective ownership of their future.

As this Interim Report sets out, upgrading and expanding our electricity networks is not simply an engineering challenge: it is our chance to lead the way on the global shift to clean, electrified economies, while maximising the benefits of network investment to the UK.

These include new industries, high-quality jobs in every region, and a more resilient energy system.

This report gives shape and momentum to a long-term programme of work that will strengthen the UK's energy infrastructure and build its industrial capability.

It identifies the early evidence on the demand for skills, supply chain capacity and workforce. It also highlights work that is already under way and lays the foundations for the full Growth Plan to be published in 2026.

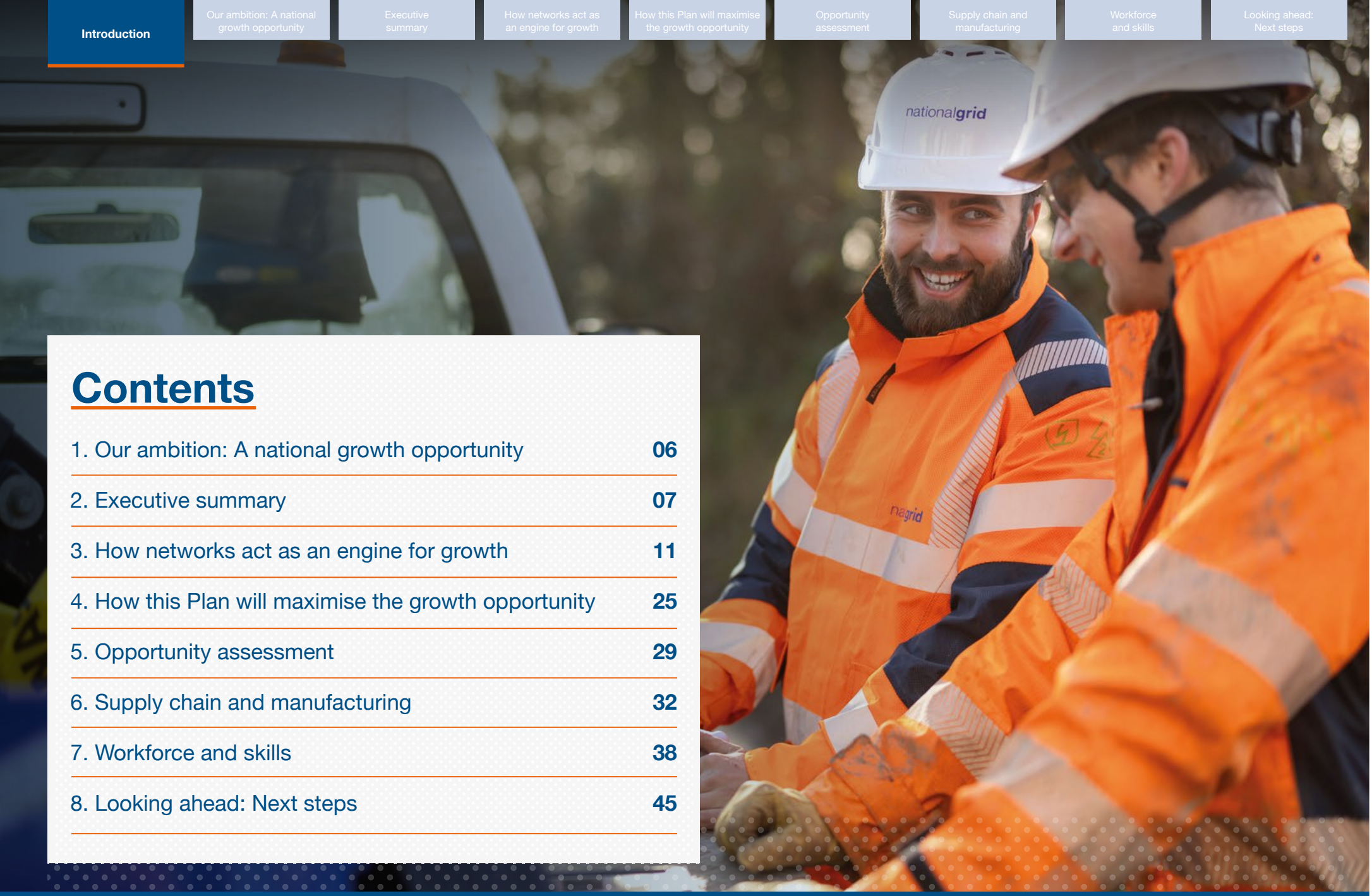
Government, along with Ofgem and NESO, will continue to support these efforts. We welcome the industry-driven recommendations on how we can grow our skilled workforce, manufacturing, and services, as we build out the grid.

Going forward, we know we need clear, evidence-based commitments; giving investors the confidence they need, improving pipeline visibility for the supply chain and ensuring the UK can attract the talent needed.

This is a huge challenge, but the reward is equally immense: a stronger economy, a more secure energy system, and a cleaner, more prosperous future. I want to commend industry for the leadership shown in developing a Growth Plan for the sector.

I am grateful to everyone who has contributed to this Interim Report. Your commitment and collaboration reflect the ambition required to deliver the networks that will power Britain's growth.

Michael Shanks MP
Minister of State for Energy
Department for Energy Security and Net Zero



Contents

Our ambition: A national growth opportunity

The electricity networks sector is fundamental to the UK's future - providing the foundation for growth and prosperity across every community and region.

The most ambitious transformation of Great Britain's electricity networks since the 1950s presents a once-in-a-century growth opportunity. A national endeavour to create a grid that is fit for the future – a powerful engine of long-term, sustainable economic growth and prosperity across every part of the country. To take the ambitious steps needed to reindustrialise the UK for a new technology-led era and to strengthen domestic capability across the vital supply chains and manufacturing sector.

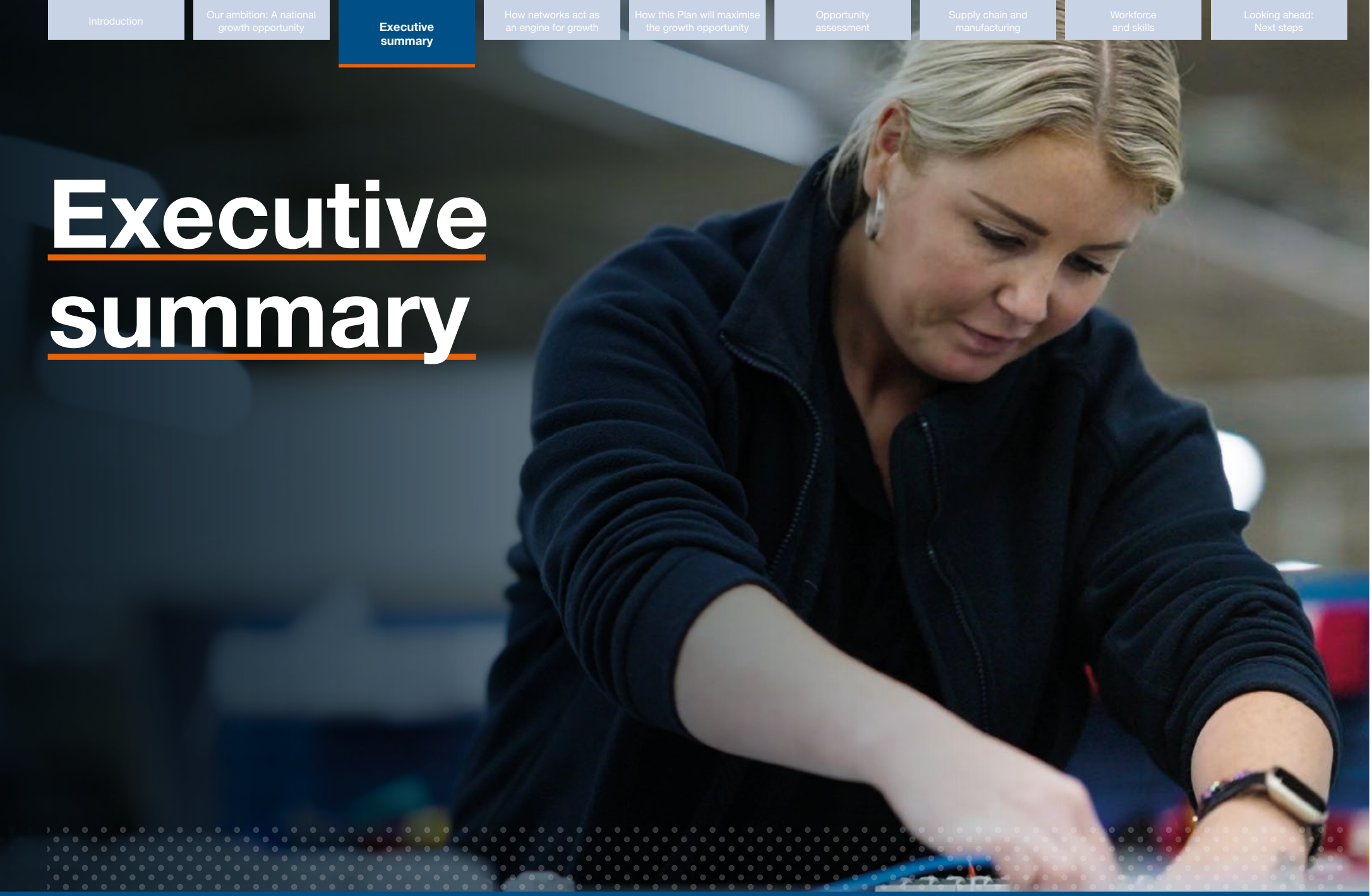
As a nation, we rely on Great Britain's electricity networks for every aspect of daily life. Ours is one of the most reliable networks in the world, delivering in excess of 99.9% reliability across distribution and transmission.[2]

£83bn

Networks act as an engine for long term growth, supporting the net zero economy's £83bn contribution in 2024 to the wider UK economy.[1]

[1] https://eciu.net/analysis/reports/2025/net-zero-economy-across-the-uk
[2] https://www.nationalgrid.com/electricity-transmission/who-we-are/riio-t2-performance/safe-and-reliable-network

Executive summary



Executive summary

Electricity powers millions of homes. It keeps the essential services we need, such as schools and hospitals, running. It adapts to consumer demand, giving us choices about whether to connect an EV or invest in a heat pump, and it meets the energy needs of businesses large and small across all sectors of the economy.

The grid has provided reliable, secure supplies of electricity for the past 70 years, but we are now at a turning point. Work to upgrade the network is already happening at pace. It is a vast undertaking – not only do we need to maintain and upgrade the grid for the demand that already exists, we need to prepare for a world in which electricity demand could at least double by 2050.[3]

To deliver this upgrade, we must grow the workforce both in the network companies and in the wider supply chain. We will need to identify, recruit, train and retain skilled workers on a scale not seen for a generation.

£70bn+

The transmission operators will deliver the largest increase in capital spending in the history of the privatised electricity transmission sector between 2026-31, potentially exceeding £70 billion over the period to strengthen the transmission network, maintain resilience, deliver energy security and clean power.

£37bn-£50bn

The National Infrastructure Commission's analysis shows that to meet increasing demand between today and 2050, around £37-£50 billion of investment in the distribution network is required.

Onshore network investment to meet net zero could directly support an additional

50,000-130,000

full-time equivalent (FTE) jobs by 2050[4]

Jobs from reinforcing the electricity network could contribute between

£4bn-11bn

of Gross Value Added (GVA in 2050, 2020 £)

[3]Electricity Distribution Networks: Creating capacity for the future (National Infrastructure Commission, 2025)
[4]Electricity Networks Strategic Framework: Enabling a secure, net zero energy system (BEIS/Ofgem, August 2022)

A national growth opportunity

Our work to strengthen and upgrade the networks is a huge challenge but at the same time an enormous national growth opportunity for the UK. Renewing the network will stimulate economic growth by creating tens of thousands of good quality jobs and long-term career pathways in every region of the country, both in the energy sector and beyond.

Electricity is the foundation for growth across many sectors of the economy and has the potential to make the UK the destination of choice for investment in new and emerging industries, by ensuring that energy is not a barrier, but instead an enabler of growth.

Crucially, it is a chance to build on our existing strengths in the networks supply chain, allowing manufacturers of network equipment to expand, to improve the services, skills and civils capabilities, and ensure that we can seize the opportunities created by the renewal of the network to deliver the maximum economic benefit to the UK.

We must manage this transition in a way that delivers good value for money for consumers and creates visible economic benefits for communities across the UK. Investment in the network happens on behalf of consumers and is paid for through consumer bills – demonstrating that this spending is delivering benefits, which is critical to retaining the support of the public.

What we are doing

For the first time, the sector – network operators and the supply chain, together with the UK, Welsh and Scottish Governments, Ofgem and wider partners – is coming together to build a plan to maximise the contribution that the electricity networks sector makes to UK growth.

The Electricity Networks Sector Growth Plan, due to be published in the summer of 2026, will establish a roadmap of actions and priorities for the sector, based upon evidence and an understanding of the opportunity ahead. The Plan will outline how the sector is working collaboratively to deliver its vision, including:

1. Placing electricity networks at the heart of the UK's growth story

Highlighting networks as a direct engine for economic activity and long-term, skilled jobs across every region, alongside their crucial role in enabling the growth and success of wider sectors across the economy.

2. Growing the supply chain for manufacturing and services

Maximising domestic supply chain benefits, resilience and export potential by leveraging existing strengths and identifying high-potential growth areas to build domestic capabilities.

3. Ensuring that the sector has the skilled workforce needed to deliver at pace

Driving collaborative action across the sector to attract, train, develop and retain the workforce needed to design, build and maintain our networks.

4. Creating an enabling environment for investment in capabilities and skills

Enhancing visibility of future opportunities, supporting suppliers to engage in the market, encouraging innovation, and determining how policy and regulation can support the sector's growth.

A national growth opportunity

Both the UK Government's Clean Power 2030 ambition and Modern Industrial Strategy, as well as the Welsh Government's Future Energy Grids project highlight the critical role of networks in unlocking economic opportunity. The strategy underlined Government's commitment to the sector while highlighting its importance for driving direct and indirect growth.

This **Interim Report** is the first step – a progress marker, setting out the data-led action that sector is taking.

The scale of upgrades to the electricity networks will accelerate further in the coming years. There is a clear need to respond with urgency – putting in place the building blocks for growth – beginning with a collaborative effort that unites the whole sector.

The moment to start is now.

Over the next six months, we will be conducting the deep, sector-wide analysis that will inform the full Electricity Networks Sector Growth Plan.

This work will deliver:

1. **A comprehensive economic and supply chain analysis** to quantify the economic opportunity stemming from network investment.

2. **An action plan to support the growth of the UK supply chain** and to strengthen domestic manufacturing capability.

3. **A collaborative work programme to deliver workforce and skills requirements for the whole sector,** covering transmission, distribution and the supply chain.

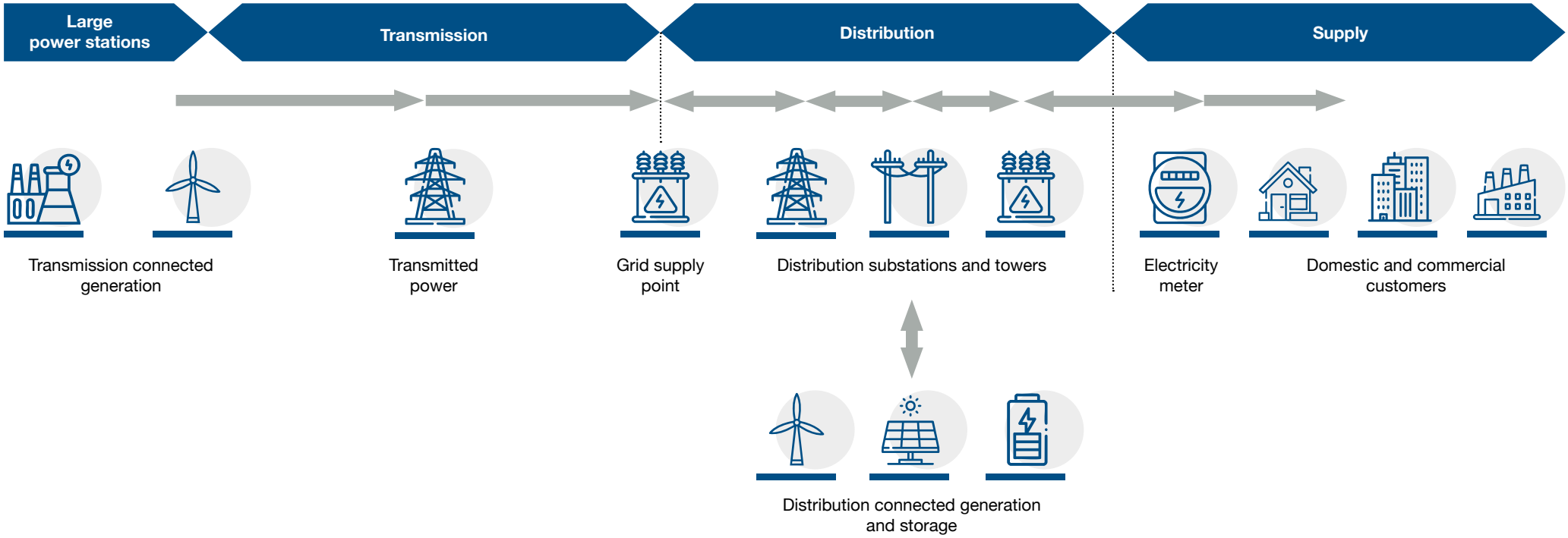
How networks act as an engine for growth

Great Britain's electricity networks connect us to the energy we need. Central to the challenge facing the UK's energy system is the need for an accelerated build of infrastructure – an unprecedented expansion – to increase supply while delivering energy security, decarbonising power and meeting net zero targets.

What are networks?

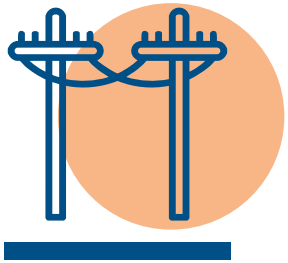
Network operators play a vital role by:

- Delivering a massive increase in supply to domestic and industrial customers
- Upgrading the network to maintain world-class resilience and to support the installation of electric vehicle charging points and pumps
- Enabling the UK to generate more of its electricity from homegrown renewable energy, increasing energy security and delivering clean power



How networks operate

Transmission networks are like motorways for electricity. They carry large volumes of electricity over long distances, just like high-speed roads connecting cities.



Distribution networks are like the dual carriageways and B-roads that connect communities. They take electricity from the transmission lines and bring it to homes and businesses. These lines make sure the electricity gets to where it's needed locally.

The UK's transmission and distribution network operators are private companies that are licensed by Ofgem and regulated through Ofgem's price control processes.

Some homes and businesses are connected to Independent Distribution Network Operators (IDNOs) and Independent Connection Providers (ICPs), who own and operate smaller parts of the electricity networks focused on specific areas.

The transmission lines connecting our offshore wind is managed by Offshore Transmission Operators (OFTOs).

Networks price controls

Ofgem regulates its licensees through RIIO (Revenue = Incentives + Innovation + Outputs). RIIO is a regulatory framework that sets price controls for energy network companies in Great Britain.

The goal is to ensure these companies have the necessary revenue to efficiently run their networks, invest in improvements, and support the transition to a low-carbon energy system, while providing value for money for consumers. RIIO periods currently run over five years.

Transmission:
We are currently in the Electricity Transmission 2 (ET2) price control period – 1 April 2021 to 31 March 2026. Business plan decisions for ET3 were finalised and announced on 4 December 2025.

Distribution:
We are currently in Electricity Distribution 2 (ED2) price control period – 1 April 2023 to 31 March 2028, and have now started the process for developing ED3, which will begin on 1 April 2028.

Our sector today

£83bn

contribution of the net zero economy to the wider economy in 2024 (ECIU/CBI)[5]

99.9%

reliability in both distribution and transmission[6]

20,000km

of electricity transmission cables (ENSF)[7]

800,000km

of electricity distribution lines (DESNZ)[7]

over

25,000+

employees in the transmission sector and supply chain (EU Skills)[8]

over

28,000

employees in the distribution network operators (EU Skills)[9]

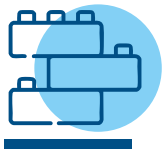
over

14,000

employees in UK network infrastructure manufacturers (BEAMA)[10]

[5]https://eciu.net/analysis/reports/2025/net-zero-economy-across-the-uk
[6]https://www.nationalgrid.com/electricity-transmission/who-we-are/riio-t2-performance/safe-and-reliable-network
[7]https://www.gov.uk/government/publications/electricity-networks-strategic-framework/electricity-networks-strategic-framework-appendix-1-electricity-networks-modelling
[8]Electricity Transmission Industry Workforce Planning (Energy & Utility Skills, 2025)
[9]Electricity Distribution Industry Workforce Planning (Energy & Utility Skills, 2025)
[10]https://www.beama.org.uk/resourceLibrary/market-pulse-highlights---q2-2025.html

Where we want to get to



Supporting up to

50GW

of offshore wind and **over 22GW of battery storage** by 2030 (NESO)[11]

£70bn+

of investment in transmission in the next transmission price control (Ofgem)[12]

£37bn-50bn

of investment to increase capacity on the distribution network between now and 2050 (NIC)[13]

2x

electricity demand deliver increased capacity to meet a doubling in electricity demand by 2050 (NIC)[13]

Up to

130,000

additional jobs in the electricity networks sector by 2050 (ENSF)[14]

2x

double employment for the average network manufacturing company by 2035 (BEAMA)[15]

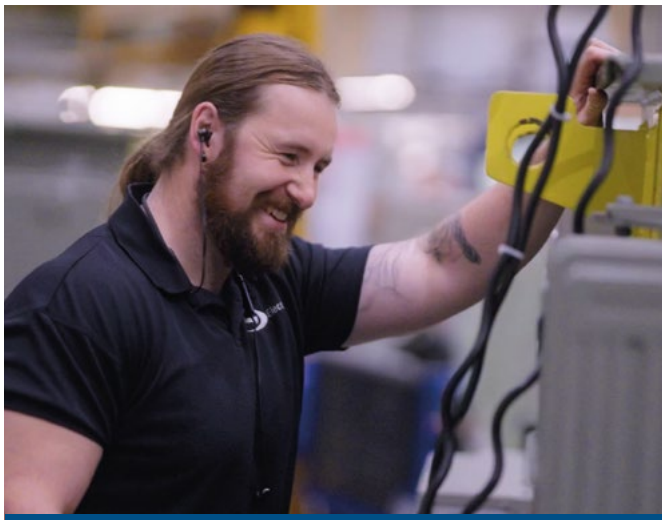
[11]https://www.neso.energy/document/346651/download
[12]Ofgem final determinations for T3: https://www.ofgem.gov.uk/decision/riio-3-final-determinations-electricity-transmission-gas-distribution-and-gas-transmission-sectors
[13]https://webarchive.nationalarchives.gov.uk/ukgwa/20250327100350/https://nic.org.uk/studies-reports/electricity-distribution-networks-report/
[14]https://www.gov.uk/government/publications/electricity-networks-strategic-framework/electricity-networks-strategic-framework-appendix-1-electricity-networks-modelling
[15]https://www.beama.org.uk/resourceLibrary/market-pulse-highlights---q2-2025.html

Why we need a plan to maximise the domestic benefits of network investment

The potential benefits from investing in transforming the grid are clear

The opportunity from transforming the grid is clear:

- Create a long-term pathway to cheaper, greener, more secure energy for the UK
- Act as an engine for long-term growth, with the clean energy transition adding £83 billion to the UK economy[16]
- Generate up to 130,000 additional jobs across electricity networks by 2050[17]
- A long-term pathway to cheaper, greener, more secure energy for the UK while ensuring that consumers and businesses can connect to the network when they need to
- The potential for more than 56,000 additional skilled jobs across electricity transmission operators, the transmission tier 1 supply chain and distribution through RIIO-T3 and ED3
- Delivering growth across the domestic supply chain, building upon existing UK capabilities to supply domestic network operators and export globally – bringing domestic economic benefits, enhancing supply chain resilience and helping to reduce lead times for network operators and those in wider sectors.



What is the risk of not maximising this investment?

- A constrained network will increase costs and hold back the transition away from volatile international gas markets and take longer to connect generators and users, holding back growth across the wider economy
- Failing to capture the high-value economic benefits and skilled jobs associated with building and operating our electricity networks, with a lack of investment resulting in skills shortages and limiting the potential for regional growth and regeneration
- A missed opportunity to attract investment into the UK's supply chain and capitalise on our existing domestic strengths, with the potential loss of manufacturing, skills, services and capabilities.

[16]https://eciu.net/analysis/reports/2025/net-zero-economy-across-the-uk
[17]https://assets.publishing.service.gov.uk/media/6690f4220808eaf43b50ce41/electricity-networks-strategic-framework-report.pdf

How networks act as an engine for growth

Electricity networks are powerful enablers of growth. They are part of the fabric of society, providing the foundations for almost every sector of the economy, from transport to automotive to emerging technologies. Without networks and the vital supply chain and manufacturing sector that powers them, there can be no economic growth.

In this section, we explore why networks have a fundamental role to play in driving economic growth and the potential benefits network investment can deliver.

Investing in a future-proof power grid is a national growth opportunity. As more and more of everyday life is powered by electricity, the networks sector will be increasingly critical to:

Economic growth

enabling businesses to expand and new industries to flourish

National security

ensuring security of supply and allowing greater access to homegrown energy

Industrial competitiveness

making the UK an attractive place to invest

We are at a pivotal moment. The UK is competing with other nations to be home to the new and emerging technologies that will be the focal point of a second 'industrial revolution'.

We are also in an international competition for expertise and resource – to secure the supply chain needed to deliver the future network. All of which means the investment window through to 2035 is vitally important. Investment decisions are being made now – we must set clear signals that enable upskilling of UK capabilities to avoid loss of growth.

Networks are already seeing record investment levels and this will accelerate further in the coming years. Between 2026 and 2031, capital investment in electricity transmission may exceed £70 billion[18], while at distribution level, the National Infrastructure Commission (NIC) estimated an additional £37 billion-£50 billion on top of current investment could be needed to strengthen networks in Great Britain out to 2050.

Network companies are currently developing business plans for the next distribution price control (ED3) and the true scale of investment will become clearer once the ED3 business plans are submitted in Q4 2026.

The supply chain and manufacturing sector will be critical to success. Upgrading and expanding our electricity networks will require large quantities of equipment, including transformers, switchgear, cables, convertors and substations, and protection and control technology.

It will also require the range of civil engineering and wider services to design, install, operate and maintain the network.

This unprecedented level of investment will generate two distinct opportunities for economic growth:

Direct growth

Direct growth in the networks sector itself – enabling the growth of the UK's networks manufacturing sector, as well as creating sustained demand and training opportunities for skilled workers to build, connect, operate and maintain the future network.[19]

Indirect or 'foundational' growth

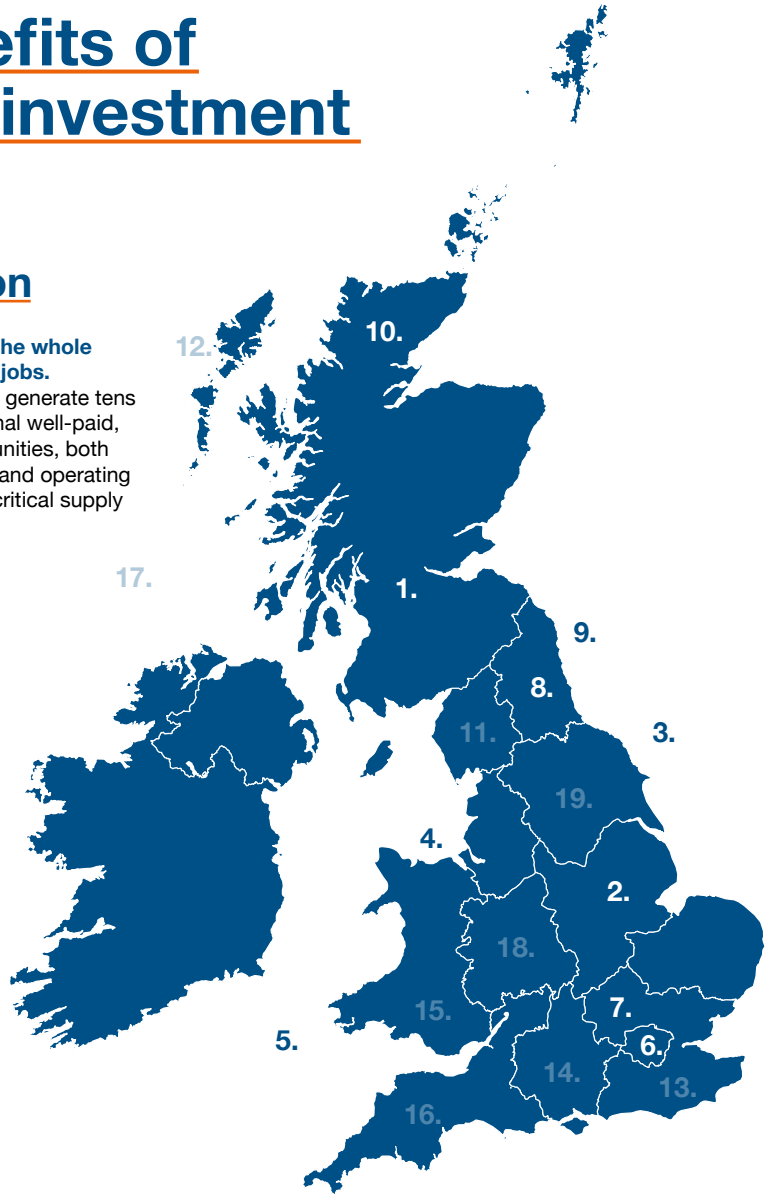
Supporting growth across almost every sector of the economy, including industries such as ports, automotive and advanced manufacturing, as well as enabling the electrification of heat and transport. Network renewal projects will also bring significant, positive benefits to local economies in terms of money spent with local businesses such as shops, hotels and transport.

[18]https://www.ofgem.gov.uk/decision/riio-3-final-determinations-electricity-transmission-gas-distribution-and-gas-transmission-sectors
[19]https://assets.publishing.service.gov.uk/media/6690f4220808eaf43b50ce41/electricity-networks-strategic-framework-report.pdf

The benefits of network investment

1. Regional regeneration

The network reaches the whole country and so do the jobs.
Network investment will generate tens of thousands of additional well-paid, local jobs within communities, both in building, maintaining and operating the network and in the critical supply chains that support it.



Key
- Distribution
- Transmission and distribution
- Transmission
- Supply chain

1. Central/Southern Scotland

SP Energy Networks	Diageo Cameronbridge Distillery: Green whisky production	Distribution
SP Energy Networks	Dealain House training hub expansion	Transmission and distribution
SP Energy Networks	EMPower training and development programme	Transmission and distribution

2. East Midlands

National Grid	Upgrading Pilgrim Hospital Boston's grid connection	Distribution

3. England

Siemens Energy	Empowering the UK workforce for net zero	Supply chain

4. England and Wales

National Grid	Great Grid Partnership	Transmission
National Grid	Electricity Transmission Partnership	Transmission

5. Great Britain-wide

Balfour Beatty	Balfour Beatty fleet investment	Supply chain
Balfour Beatty	Balfour Beatty AI investment	Supply chain
All networks and supply chain	Collaborative skills development and workforce planning powering the UK's transmission network growth	Transmission and distribution

6. London

UK Power Networks	Improving and decarbonising London buses	Distribution

7. London and South East

UK Power Networks	Investment to expand apprenticeships	Distribution
Clancy	Clancy Group's training academy powering energy growth	Supply chain

8. North East

Northern Powergrid	Local upgrades to boost capacity and resilience	Distribution
Siemens Energy	Investing to enhance production facilities	Supply chain
Northern Powergrid	Support for career switchers	Distribution

9. North England

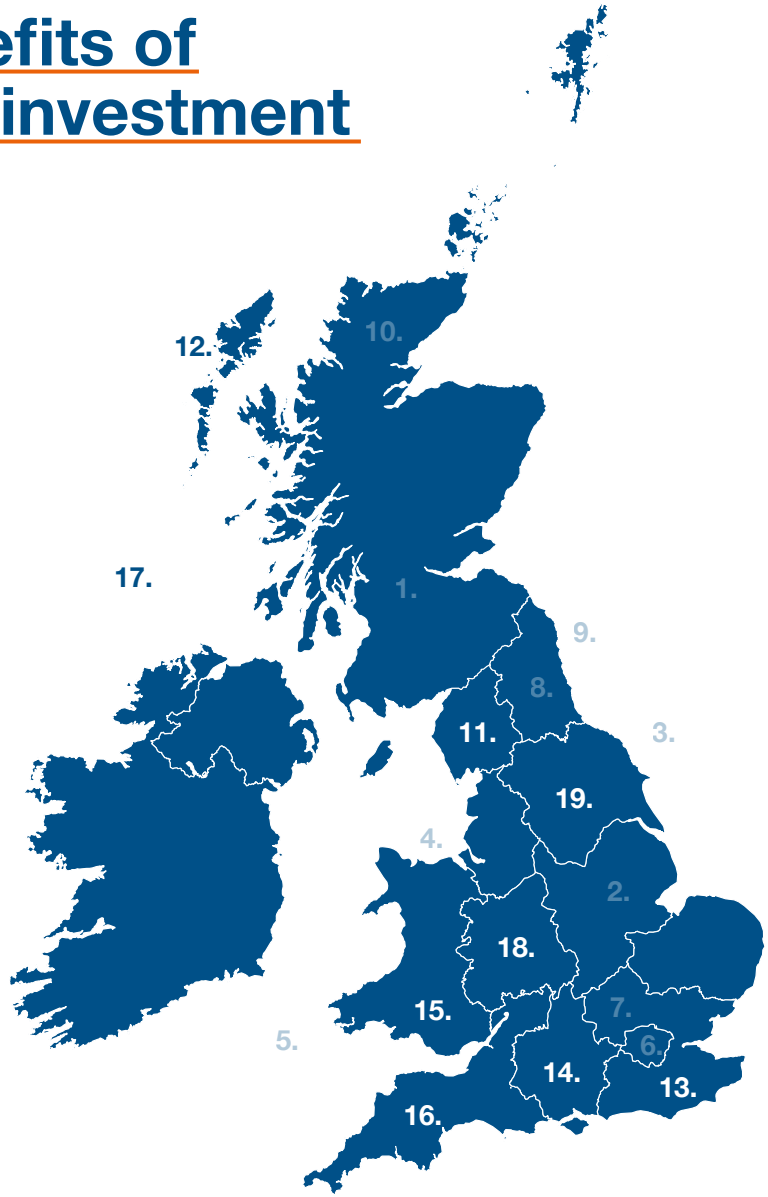
Schneider Electric	Investing in UK manufacturing	Supply chain
Siemens Energy	Global Centre of Competence for Grid Connections	Supply chain

10. North Scotland

SSEN Transmission	Energy Transition Skills Hub	Transmission
SSEN Transmission and Murphy	Accelerated Strategic Transmission Investment (ASTI) office	Transmission
SSEN Transmission	Highland Blindcraft social enterprise delivers for grid	Transmission
David Smith Contractors/ Bam Nuttall/ SSEN Transmission	Local firms completes civils for grid upgrades	Supply chain
SSEN Transmission and Hitachi	SSEN and Hitachi transmission and HVDC framework	Supply chain
SSEN Transmission	Transmission upgrades in North Scotland	Transmission
Sumitomo Electric	HVDC factory investment	Supply chain

This map highlights case studies demonstrating a range of regional investment in UK growth.

The benefits of network investment



Key

- Distribution
- Transmission and distribution
- Transmission
- Supply chain

11. North West

SP Energy Networks and Lucy Electric	SF6-free switchgear	●
SP Electricity North West	Samlesbury Enterprise Zone	●
SP Electricity North West	Greater Manchester Growth Zones	●
SP Electricity North West	Developing a strong apprenticeship programme	●

12. Scottish Islands

SSEN/ Briggs Marine	Investing to install and maintain subsea cables	●

13. South East

National Grid	Tilbury Battery Energy Storage System (BESS)	●
National Grid	AI and data centre investments	●

14. South England (central)

National Grid and Hitachi Energy	Didcot battery storage	●
SSEN Distribution	Day ahead markets	●
SSEN Distribution	Community Smart Access	●
SSEN Distribution	Supporting Rolls-Royce growth	●
SSEN Distribution	Arborist Apprenticeship Programme	●

15. South Wales

National Grid	Greenlink strengthens UK and Ireland energy security	●

16. South West

National Grid	AI and data centre investments	●
National Grid	Upgrading Taunton hospital's grid connection	●
National Grid	EV battery factory	●
National Grid	Langford Solar Farm connections	●
National Grid	Solar for Schools	●
SSEN Distribution	Clifton Farm Solar Park	●
National Grid	Supporting Jaguar Land Rover: reimagining electric luxury	●

17. UK

BRUSH Power and SSEN Distribution	BRUSH investment boosts production capacity	●
M Group	Energy training programme	●
Siemens	Siemens Blue GIS: A step change in sustainable power distribution	●

18. West Midlands

GE Vernova	Upgrade and expansion of UK production	●
Hitachi Energy	Hitachi Energy Operational Campus	●

19. Yorkshire and the Humber

Lucy Electric	LEEVI new facility	●
Winder Power/ SSEN Distribution	Winder Power UK factory expansion	●

This map highlights case studies demonstrating a range of regional investment in UK growth.

The benefits of network investment

2. Long-term, sustainable jobs and career pathways in the electricity networks sector

Crucially, these jobs will be there for the long term. Network investment is a strategic, decades-long commitment, stretching into the 2030s and 2040s. It will create sustainable and purposeful career pathways for people of all skill levels, experience and backgrounds.

Opportunities will include manufacturing roles to design and build equipment, service jobs to maintain and renew the network, as well as engineering, design and construction jobs. This will include opportunities for people looking to transition to a new career, as well as those just starting out, through graduate and apprenticeship roles.

3. Powering homes, businesses and industry

Network investment will ensure that homes, businesses and industry have access to the greener, more secure homegrown power they need, contributing to a more vibrant UK economy. Investment will enable energy flexibility, and connect more home-grown renewables, while energy flexibility services and the accelerated deployment of low-carbon technologies (LCTs) will give consumers and businesses more control over their energy than ever before. Renewing the network will also play a key role in the decarbonisation of energy-intensive sectors, such as automotive, food and drink, marine, and utilities.

x2 Peak demand on the distribution network is expected to more than double to reach between 108-119GW by 2050, from a baseline of 51GW today.

The benefits of network investment

4. Enabling the growth of emerging sectors

Technology is evolving at breakneck speed. Rapid growth in energy intensive artificial intelligence has led to data centres being designated as critical national infrastructure. Having a grid that is primed and ready to enable the next generation of yet-to-be-discovered technologies to develop at pace will give the UK a powerful strategic advantage.

5. Economic growth aligned with a fair and just transition

There is a clear need to provide a fair and just transition for communities that currently rely heavily on sectors such as offshore oil and gas for jobs and prosperity. Network expansion will create jobs and career opportunities in all parts of the UK, including those most directly affected economically by the transition from fossil fuels to clean energy.

To reinforce the scale and breadth of direct and indirect growth opportunities

In 2025, National Grid Electricity Distribution connected the UK's most powerful supercomputer to the grid (See case study on page 24). The £225 million supercomputer aims to boost the UK's capabilities in responsible and cutting-edge AI development and is ranked the 11th fastest supercomputer in the world.[20]

The UK Government and Welsh Government have announced AI zones to unlock investment. The recently announced North East AI Growth Zone is creating potential for more than 5,000 jobs and £30 billion in private investment. This will be powered by upgrades to network infrastructure in the region.[21]

Enabling works have begun on a new state-of-the-art data centre campus in Cambois, Northumberland – a landmark opportunity for the North East to become a global hub for AI infrastructure. This growth would not be possible without upgrades to the electricity transmission network, including by doubling its capacity across England and Wales between 2026 and 2031.[22] See case study on page 24.

[20] NGED, 2025 https://commercial.nationalgrid.co.uk/news-and-events/latest-news/nged-connects-uks-most-powerful-supercomputer-to-grid
[21] Gov.UK, 2025 https://www.gov.uk/government/news/north-east-england-set-for-billions-in-investment-and-thousands-of-jobs-as-uk-and-us-ink-tech-partnership?utm_source=LinkedIn&utm_medium=social&utm_campaign=Orlo&utm content=Corporate
[22] https://www.linkedin.com/feed/update/urn:li:activity:7382467554637955072/

A new level of collaboration

Getting network investment right matters to the country and it matters to consumers. Ultimately, investment to upgrade the grid is made on behalf of consumers and is paid for through customer bills. Following the principle of 'do it once and do it right' will deliver the best possible value for consumers.

Capitalising on the growth opportunity requires deep collaboration across the sector, on a level not seen before. All parts of the sector will need to play their part:

- The supply chain will need to invest in new manufacturing capacity, as well as in recruiting and training new employees
- Network operators will need to take a longer term approach to investment, as well as building their own capabilities to deliver an expanded network
- Ofgem will need to support the industry through a long term approach to regulation and competition that recognises the importance of investability and the need to maximise economic value
- Governments will need to provide a continued commitment to supporting the transition, as well as helping the industry to identify and take advantage of the key economic opportunities for the UK.

The regulator must encourage efficient investment in the next distribution price control, ED3. The regulatory framework must incorporate an internationally competitive investment proposition that delivers sensible returns, inclusive of the right incentives, that encourage high levels of customer service and delivery of network, and that enables affordable, secure and sustainable energy.

There is no one-size-fits-all solution – we will collectively need to take many actions to deliver this solution. Different regions, technologies and workforce segments will need tailored approaches to succeed.

Through the Growth Plan, we will identify practical ways in which the sector can work together in the most effective way to unlock growth opportunities.

Case studies: Benefits of network investment

Energy Transition Skills Hub

Scottish & Southern Electricity Networks

Part funded by SSEN Transmission, Scotland's largest Energy Transition Skills Hub has opened in Aberdeen. The new facility includes a welding academy, an advanced manufacturing zone, and digital training suites. It's expected to support around 1,000 people into jobs over its first five years, helping to build the skilled workforce needed for Scotland's energy transition.

Tilbury Battery Energy Storage System (BESS)

nationalgrid | STATERA

National Grid has connected the UK's largest battery energy storage system (BESS) to its transmission network at the Tilbury substation in Essex. The 300MW Thurrock Storage project, developed by Statera Energy, is now energised and capable of powering up to 680,000 homes. The project helps balance supply and demand by absorbing surplus clean electricity and discharging it instantaneously when the grid requires it.

BUUK – Westland Heath heat networks and grid reinforcement

BUUK infrastructure

BUUK's Westland Heath project is one of the UK's first fully electrified heat networks, delivering low-cost, low-carbon heating while reducing grid strain. By combining thermal storage with optimised heat pump sizing, the scheme cuts peak demand by around 15% compared to individual ASHPs, lowering costly reinforcement needs. This approach demonstrates how electrified heat networks can provide affordable heating for consumers while supporting a resilient, least-cost pathway to net zero across the UK energy system.

Samlesbury Enterprise Zone

SP Electricity North West

SP Electricity North West has invested £7.5 million to create vital new capacity on the network in Samlesbury, Lancashire. This investment forms part of the Samlesbury Enterprise Zone (EZ), a priority development within Lancashire's Growth Plan designed to drive innovation and economic growth in aerospace, defence, and clean energy. The EZ is expected to attract more than £20 billion of investment across Lancashire, creating transformative opportunities for sustainable, high-value growth.

Local firm completes civils work ahead of time for EGL2 (grid upgrade)

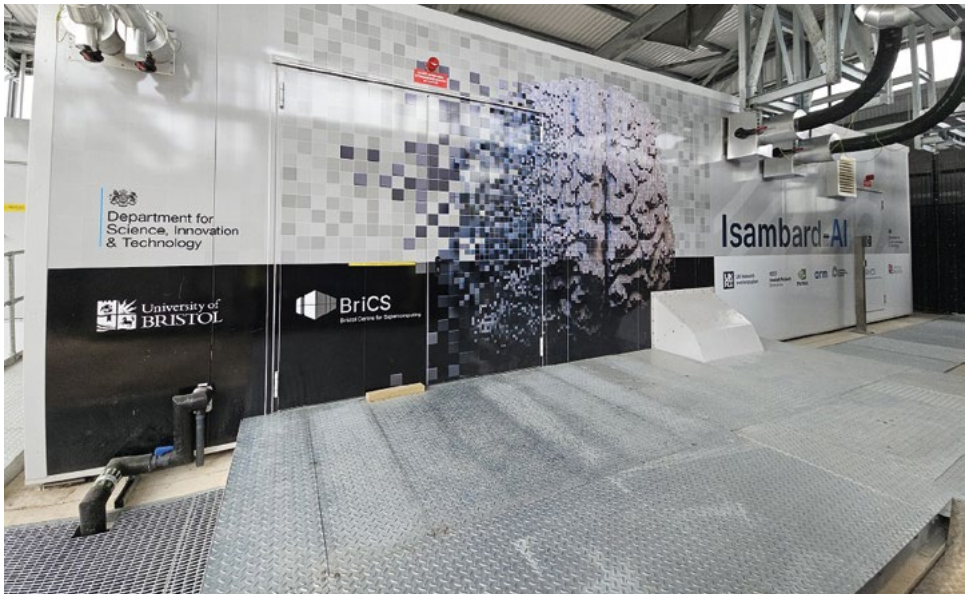
David Smith Contractors Ltd Civil & Demolition Contractors

bam nuttall

Scottish & Southern Electricity Networks

Fraserburgh-based David Smith Contractors Ltd has completed civil engineering works for the Eastern Green Link 2 (EGL2) converter station platform in Peterhead. The appointment of David Smith Contractors Ltd to deliver this crucial aspect of EGL2 underlines the project's commitment to engaging the local supply chain in north-east Scotland, with more than £9 million of contracts awarded to local businesses.

Case studies: Benefits of network investment



AI and data centre investments

nationalgrid

In 2025, National Grid Electricity Distribution connected the UK's most powerful supercomputer to the grid.

Worth £225 million, the supercomputer is ranked the 11th fastest in the world and will drive responsible AI development.

This year, the UK Government announced the North East as an AI Growth Zone – set to create more than 5,000 jobs and attract £30 billion in private investment, supported by upgrades to local infrastructure.

Work has also begun on a new data centre campus in Cambois, Northumberland, positioning the region as a global hub for AI.

This growth would not be possible without upgrades to the electricity transmission network, including by doubling its capacity across England and Wales between 2026 and 2031.

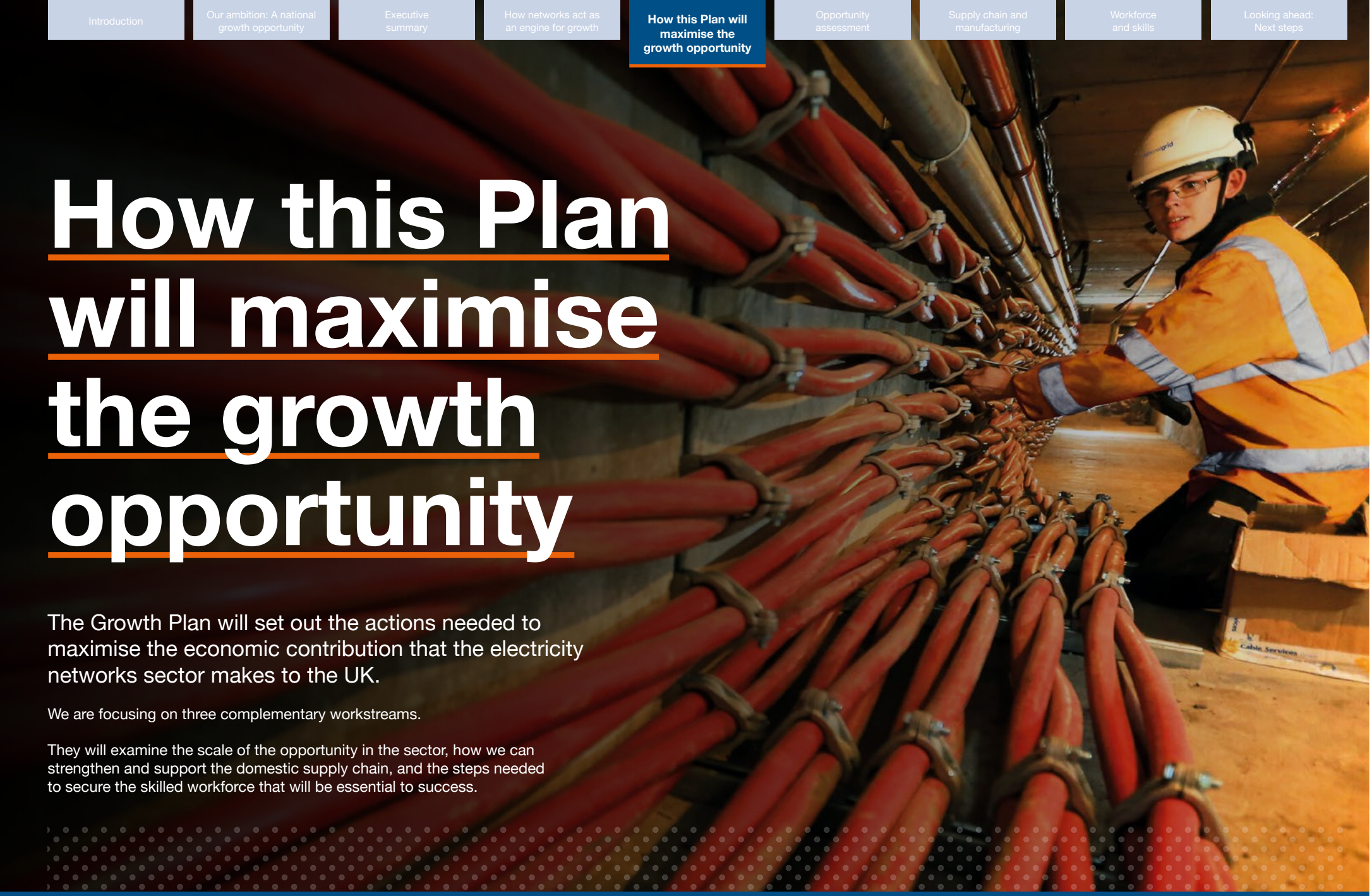
Siemens Energy's investments

SIEMENS energy

Siemens Energy has invested £2 million enhancing its production facilities in Newcastle to build protection and control panels for electricity substations.

The investment will add 65 jobs to the 550-strong workforce at the site. Siemens said the investment demonstrates its commitment to Newcastle Upon Tyne and its local supply chain, as well as to boosting skills development in the UK, where it employs 6,500 people.

In Manchester, the company's investment in its global centre of competence, which has designed and built 20 offshore substations since 2007, has resulted in 100 new jobs over the past two years.



How this Plan will maximise the growth opportunity

The Growth Plan will set out the actions needed to maximise the economic contribution that the electricity networks sector makes to the UK.

We are focusing on three complementary workstreams.

They will examine the scale of the opportunity in the sector, how we can strengthen and support the domestic supply chain, and the steps needed to secure the skilled workforce that will be essential to success.

Case studies: Opportunity assessment

SPEN Strategic Investment, NGET investment and procurement approach, and SSEN Transmission investment

The next five years will see the largest investment in electricity transmission in history.

Scottish Power Transmission will invest up to £12 billion to upgrade and expand its network in Central and Southern Scotland, creating around 1,400 jobs directly and supporting more than 11,000 across the UK.

NGET will invest up to £35 billion between 2026 and 2031, in response, National Grid is transforming its approach to procurement, giving the supply chain greater visibility and moving to a longer term collaborative approach that builds strong regional partnerships.

This approach is driving skills investments locally, regionally and nationally.

The Great Grid Partnership initially focuses on the work required by the end of the decade to deliver nine major infrastructure projects across England and Wales, forming part of a £9bn supply chain framework.

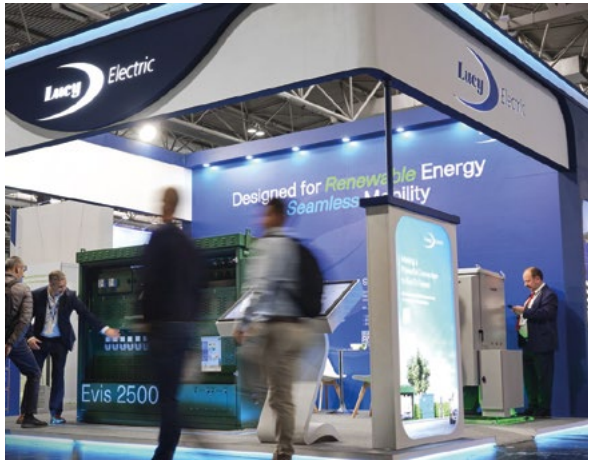
Separately through the Electricity Transmission Partnership, National Grid expects to award around £8 billion worth of substation construction work over the RIIO-T3 period, covering multiple regions and around 130 projects.

Meanwhile, SSEN Transmission is committing at least £22 billion to one of Scotland's biggest-ever programmes to upgrade the high-voltage network – unlocking renewable energy potential, strengthening energy security, and supporting up to 17,500 jobs.

Case studies: Transport

LEEVI new facility

Lucy Electric EV Infrastructure has invested £2.2 million to build a new manufacturing facility in Sowerby Bridge, West Yorkshire, bringing together its experience in package substations with the feeder pillars required to enable EV charging infrastructure. The new site will expand production capacity, reduce lead times and create new jobs, ensuring the company is well-placed to meet rising demand for EV infrastructure while contributing to regional economic growth.



EV battery factory

National Grid has launched a multi-million-pound project to connect the UK's biggest electric vehicle battery factory at the 620-acre Gravity Smart Campus in Somerset to the grid. The 40GWh facility – run by battery business Agratas – will create 4,000 skilled green tech jobs and supply almost half of the batteries needed by the UK automotive industry by the early 2030s.

UKPN £4m Green bus investment

UK Power Networks has invested £4 million in new power infrastructure which has put 109 new green buses on London's roads. Arriva's new electric buses will run from Whitehall Road bus depot following energisation of new electricity infrastructure which was funded, fast-tracked and built through UK Power Networks' Green Recovery Fund.

JLR: Reimagining Electric Luxury

JLR invested £500 million to convert the Halewood plant into its first all-electric manufacturing site, producing the Range Rover Electric. Alongside this, 100 maintenance roles will be based at JLR's Electric Propulsion Manufacturing Centre in Wolverhampton, maintaining advanced machinery that is being used to build battery packs and Electric Drive Units for JLR's next generation electric vehicles.

To secure battery supply, JLR's parent company Tata Group is investing £4 billion in a UK gigafactory in Somerset, expected to create 4,000 jobs and deliver 40 GWh of annual capacity from 2026 (see above). NGED is building two interim 33kV connections which will power the Agratas site until a high voltage 400kV substation, built by NGET, is complete.

Case studies: Schools

Northern Powergrid: Delivering social impact

Northern Powergrid's Social Impact programme is building on its investment creating lasting, meaningful change in the areas it serves.

In Harrogate, this is realised through the funding of a new biodiversity space at Coppice Valley Primary School, which will make residential trips far more affordable, benefitting children from Coppice Valley and five other nearby primary schools.

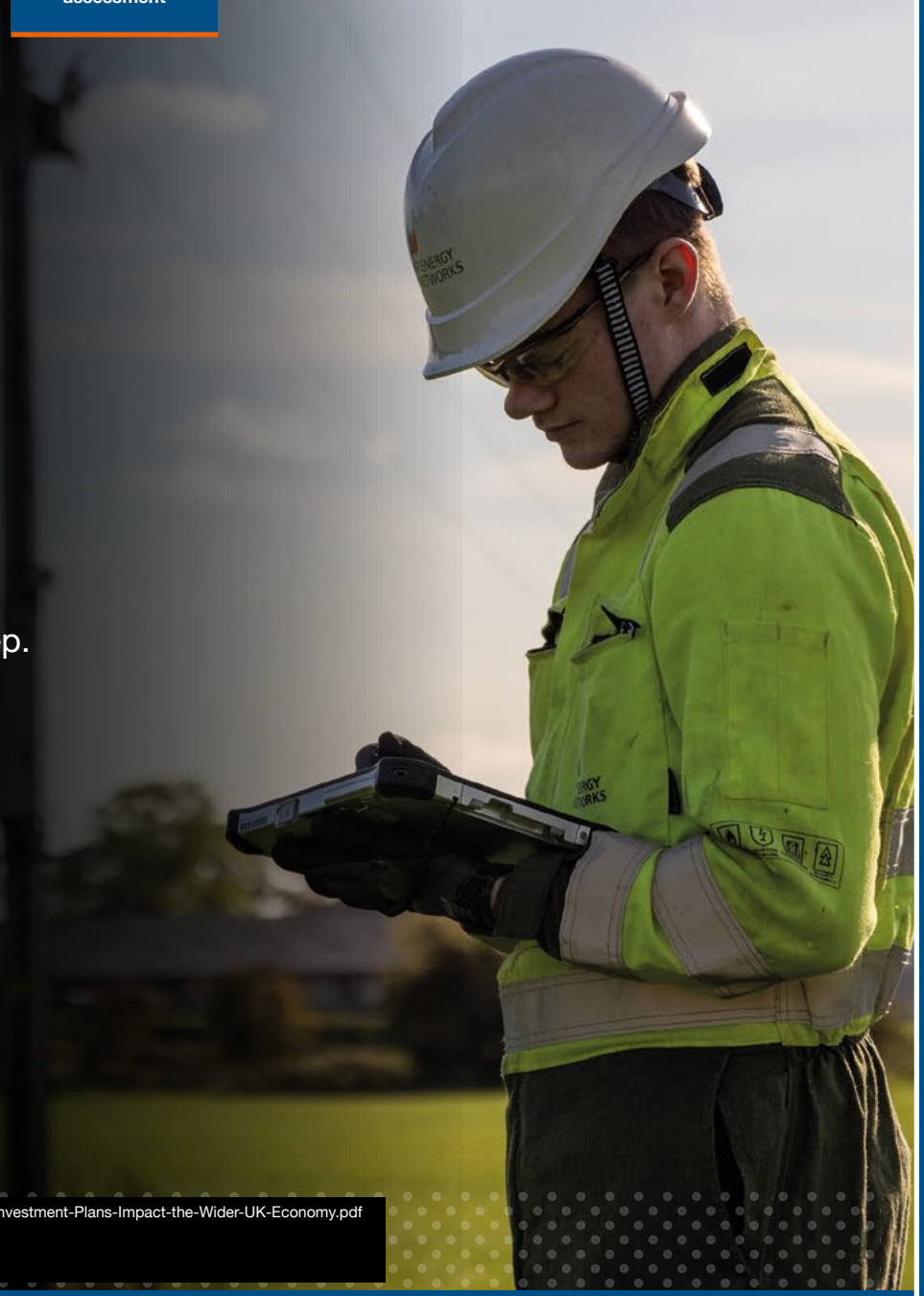
National Grid supports school solar projects

Oasis Academy Marksbury Road in Bedminster has installed 57 roof-top solar panels after receiving funding from a joint project between National Grid and Solar for Schools.

It's estimated the panels will generate 960MWh of electricity and save 185 tonnes of carbon over their 25-year operating life.

As well as finance, the academy for four to 11-year-olds has received step-by-step guidance on making their plans to harness the sun's energy a reality. It's part of National Grid's £2.7 million commitment to help schools in areas of economic deprivation install solar panels and reap the benefits of lower energy bills and a lighter carbon footprint.

Opportunity assessment



The scale of investment in Great Britain's electricity networks over the coming years presents the UK with a significant growth opportunity. Understanding the scale and breadth of that opportunity is a vital next step.

There is already strong evidence of the positive economic impact of network investment. The next transmission price control period (RIIO-T3) from 2026 to 2031 is expected to add £5 billion to UK GDP and support over 100,000 jobs.[23] Investment in the local distribution networks and the associated supply chain will build on that opportunity. We know that the networks supply chain is already growing. BEAMA's most recent Market Pulse survey found that its members have announced or made almost £150 million in investment in new capacity over the last five years, and the average company expects to see employment double by 2035.[24]

A more resilient, efficient electricity network in the UK will facilitate growth and we need to do more to understand by how much and where.

Upgrading and expanding our electricity networks will require large volumes of equipment. This includes transformers, switchgear, cables, convertors and substations, and protection and control technology. It will also require a range of civil engineering and wider services to design, install, operate and maintain the network. Grid management, automation and digital services will increasingly be needed to ensure a responsive and resilient grid.

Network growth opens multiple opportunities for investment in the UK and importantly good jobs rooted in local communities. However, building a picture of where and how big these investable opportunities are will be critical in guiding stakeholders who are making investment decisions today and choosing the UK as a place to build a workforce.

[23]SPEN – 11,500 (Strathclyde University analysis) https://strathprints.strath.ac.uk/91528/1/Turner-etal-CEP-2024-How-will-SP-Energy-Networks-RIIO-T3-Investment-Plans-Impact-the-Wider-UK-Economy.pdf
[23]NGET - 55,000 (Internal analysis) https://www.riiot3.nationalgrid.com/document/30146/download
[23]SSEN – 37,000 (Internal analysis) https://www.ssen-transmission.co.uk/globalassets/documents/riio-t3-documents/ssent-riio-t3-business-plan.pdf
[24]BEAMA Market Pulse Q2 2025__https://www.beama.org.uk/resourceLibrary/market-pulse-highlights---q2-2025.html

Building on our existing domestic strengths

The UK has a range of existing strengths in manufacturing and services, with a thriving supply chain of large multinational organisations and a broad base of SMEs.

We already have the roots of a productive manufacturing industry that can grow. For transmission, the UK produces high voltage transformers, as well as having wider capabilities in areas such as the manufacture of components for HVDC systems and new investment in HVDC cable manufacturing. This is alongside a well-established domestic supply chain for distribution equipment, which includes expertise across transformers, switchgear and cables. Protection and control and automation are also areas of domestic expertise.

UK manufacturers sell products to the regulated networks industry, as well as non-regulated customers such as independent network operators, renewable developers and data centres. Some also export globally, with significant markets in areas such as Europe and the Middle East. These companies could have scope to grow and develop their capacity for domestic and export markets in the coming years.

However, they are competing against other countries around the world for investment. Evidencing the opportunity in the UK and how we intend to support investors is essential to capture the domestic benefits from this growing global market opportunity.

As well as expertise in equipment manufacturing, the UK has a breadth of highly skilled civil engineering and services contractors, plus strong project management expertise. The UK also has strengths in research and innovation, drawing upon world-leading academic research taking place in UK universities and wider institutions. The sector is underpinned by a strong pipeline of graduates and apprentices developed through the UK's universities, colleges and graduate schemes.

The National Manufacturing Institute Scotland (NMIS) at the University of Strathclyde was commissioned to carry out a study mapping out the ecosystem that supports the UK electricity networks industry, including specialist training, research and development, innovation and equipment testing. The study recognised strong existing capabilities in innovation, skills development via research and training organisations, and academic–industry demonstrators, but identified areas for further growth including large-scale deployment of innovation. Detailed evidence generated from this study will inform the wider assessment that will be part of the final Growth Plan due to be published in 2026.

What we will do through the Growth Plan

The Growth Plan will provide us with the critical evidence that we need to take robust action and inform investment decisions for networks and its supply chain. This presents an exciting opportunity to capitalise on the benefits of network renewal through the development of UK capabilities and job creation.

At the heart of the Plan will be a comprehensive economic and supply chain analysis. This analysis will quantify the economic opportunity stemming from network investment. The Opportunity Assessment working group – comprising representatives across the sector – will work with a consortium led by LCP Delta to understand the future demand for equipment and services, the associated economic benefits, and UK capabilities and expertise.

We will assess the strategic opportunities arising across the equipment and services needed to build and operate future network infrastructure. The aim is to identify the types of equipment and services that could be sourced from the UK – continuing to leverage existing domestic capabilities and identifying areas where there could be growth in supply from the UK.

We will aim to identify existing export opportunities and how this platform can be built on. The UK is already an expert in various skills, manufacturing and other sector capabilities which are being exported to provide growth and jobs to the people of the UK.

Not everything will be built in the UK. We need to focus on those areas where we can build on existing and potential strengths. There will be equipment and services where we will need to nurture international trading relationships to ensure a resilient supply chain for customers. Even in cases where there is not an opportunity to grow UK manufacturing, there may still be associated jobs, for example in engineering and design, as is the case for a number of manufacturers with a UK presence.

This analysis builds on previous work carried out in the offshore wind sector. The Offshore Wind Industry Council, The Crown Estate, Crown Estate Scotland and RenewableUK developed an Industrial Growth Plan that conducted a similar 'make or buy' analysis to identify the UK's comparative advantages, building on previously conducted analysis of the UK's supply chain capabilities. This is now helping to direct both Government and industry to the greatest opportunities for growth in the sector, supporting decisions on financial support through schemes created by Great British Energy, The Crown Estate, the National Wealth Fund and the Offshore Wind Growth Partnership.

The Plan builds on previous work in the networks sector. This includes a study commissioned by BEAMA in 2022 that explored the potential supply chain opportunities associated with the infrastructure investment to meet Net Zero by 2050. This found that some products could require a tenfold increase in manufacturing volumes under some scenarios.[25]

The UK is not the only country making this transition. Other nations are also investing in decarbonisation, electrification and expanding their electricity networks, as well as the production capacity to support this. If we do not act, we could be 'outcompeted' for investment by other countries, as well as facing challenges in accessing the scarce production capacity required to manufacture key network equipment.

This is not just critical for the regulated network companies but for the rest of the energy sector. Renewable projects, data centres and housing developments also require supplies of the same equipment. Developing a more comprehensive understanding of the total market is critical to ensuring that all parties can plan to get the products and services they need, when they need them.

To attract greater global investment, the UK needs stronger, data-driven evidence. Clearly defining the scale of the opportunity will help investors make confident decisions, enable more strategic long-term planning, and provide the robust foundation needed for any policy or regulatory changes that can accelerate growth in UK production.

[25] Growing the Supply Chain for a Net Zero Energy System, BEAMA/Energy Systems Catapult (2022) https://www.beama.org.uk/resourceLibrary/growing-the-supply-chain.html

Supply chain and manufacturing

The UK has a well-established and significant networks supply chain. Domestic suppliers provide equipment including transformers, switchgear, protection, HVDC equipment and automation technology.

BEAMA members in the UK's electricity network manufacturing industry have an annual turnover of around £2 billion and employs 14,000 people, including a workforce that represents every region of England, Scotland and Wales.

The scale of investment in the electricity network presents both a huge opportunity and a huge challenge.

The whole networks sector will need to work together to maximise the benefits of this investment.

£2bn BEAMA members in the UK's electricity network manufacturing industry has an annual turnover of around £2 billion and employs 14,000 people.

The opportunity

The capacity of the network needs to grow. The National Infrastructure Commission's (now NISTA) 2025 distribution network study found that load-related investment in the distribution network will need to at least double to enable the benefits of electrifying transport and heating – on top of routine investment like replacing end-of-life assets.

This increased investment to support electrification will create significant opportunities for growth in UK manufacturing. This growth in equipment volumes will also require similar growth in the services sector to install and maintain equipment. There is more we can do as industry to make the most of this opportunity, and we will work together as the sector as part of the Growth Plan to identify how we can do that.

We are already seeing growth in demand. Lead times for equipment are increasing. Meanwhile, demand from the regulated networks sector will continue to grow. There are also increasing demands from outside the traditional regulated networks sector. Data centres, renewables and housing projects are all looking to access many of the same products.

Growing industrial capacity takes time. The moment to start is now. Some capacity increases are relatively quick, such as adding new shifts to an existing production facility. But larger and more complex expansions take longer – installing new equipment, training new staff, and in the case of new sites, getting planning permission and a grid connection. It is likely to take two to five years for manufacturers to develop a 50% increase in capacity – with some manufacturers saying it would take five years or more. To meet the demands of the future network, we need to start the process as soon as possible.

Barriers to growth

The supply chain faces a range of challenges, many of which can be solved through greater collaboration across the sector or support from Governments and regulators. We will use the Growth Plan as an opportunity to tackle these barriers by working together as an industry – including network companies, supply chain, Governments, NESO and Ofgem – to determine a way forward. To expand capacity, manufacturers need:

- **Visibility of demand** to create a clear pipeline of work that allows suppliers to develop a business case for expansion
- **Greater confidence and clarity that those volumes will come forward** – ensuring that network investment plans are delivered so that suppliers can firmly plan their capacity
- **Standardisation and harmonisation** of both equipment specifications and procurement, which will improve predictability and allow manufacturers to use their capacity more efficiently, speeding up delivery
- **Ensuring new manufacturers can enter the market**, including promoting and explaining the procurement processes used by network companies. It is also critical that both new and existing manufacturers can supply new products to network operators without excessive administrative burdens
- **Policy and regulatory clarity** on issues like the future approach to regulation of equipment that contains SF_6, where both manufacturers and network operators would benefit from an agreed regulatory approach that allows greater confidence in planning future product development and investing in capacity.

The sector will need to work together to demonstrate the value of local production to the economy. This is critical for demonstrating to the public that the sector is providing economic growth. It will be crucial to provide evidence to Government and Ofgem to support any legislative and regulatory changes that may be required to enable responsive and sustainable supply chains.

Demonstrating the value of local production will be critical to move to a model that places more consideration on the economic value of network development.

What we've done so far

Working with Ofgem, the sector has started to take steps to improve how networks and the supply chain work together to tackle supply chain constraints, allied with challenging project delivery timescales.

There have been important first steps in the transmission sector to work with the supply chain, including the introduction of the Advanced Procurement Mechanism (APM), which brings forward allowances to allow transmission operators to book capacity ahead of time, providing greater certainty for both network companies and the supply chain.

The APM builds on the lessons learned by the Accelerated Strategic Transmission Investment (ASTI) programme, which has successfully enabled transmission operators to access equipment in advance, in bulk, to deliver on projects critical for connecting our offshore wind needed to meet the 43 to 50 GW UK target. The transmission operators are also working to standardise equipment specifications to deliver efficiencies across manufacturing and project delivery.

The GB transmission operators are driving greater standardisation of equipment design specifications across the transmission sector to deliver efficiencies across manufacturing and project delivery. The GB transmission owners have implemented a sector-wide process by which transmission operators equipment specifications are assessed, compared, and opportunities to further standardise are progressed.

There has been good progress, much of it in response to the UK Government's Transmission Acceleration Action Plan – but there is more to do.

The distribution networks are still in the process of developing their plans for the ED3 price control, which begins in 2028. Ofgem has signalled in its methodology consultation for that it will provide more upfront funding for DNOs, enabling them to take a more proactive approach to investment. DNOs will also be required to publish a delivery strategy, and Ofgem is consulting on requiring the publication of more data on equipment volumes.

What we will do through the Growth Plan

To support the growth of the UK supply chain, the Growth Plan will set out actions to:

- Improve visibility of future volumes of work through publication of additional data
- Increase confidence that those volumes will be delivered, including making network procurement practices more predictable
- Further standardise and harmonise the equipment used on the network, paired with greater interoperability and modularisation of products
- Recommend a future pathway for regulation that moves towards a strong presumption against the installation of equipment containing SF_6
- Demonstrate the value of increased local supply chains to the energy system and wider economy
- Implement procurement practices that promote the use of local, responsive and sustainable content, including understanding any regulatory and legislative barriers
- Ensure that procurement drives innovation and encourages the development of new products, as well as reducing barriers for new entrants.

Case studies: Supply chain and manufacturing

Balfour Beatty

Balfour Beatty is investing in Painter Brothers, a leading UK manufacturer of electricity pylons. The Hereford site will gain a new facility by 2028, tripling output to 15,000 tonnes annually. Advanced automation, local job creation and expanded apprenticeships will strengthen regional supply chains and meet growing infrastructure demand.

Brush Group investment

BRUSH is a leading manufacturer of power transformers, electrical switchgear and associated solutions. In 2024, it opened a multi-million flagship transformer test cell facility at the firm's Loughborough manufacturing base, which allows the company to increase its production capacity. BRUSH Power Solutions has also been named as one of the contract partners to deliver part of the system upgrade for SSEN Distribution.

The £450 million investment will see SSEN's existing network of wooden poles and overhead lines renewed and reinforced, substations updated, and improvements made to the underground network. It is anticipated that the project will create at least 300 local jobs.

Sumitomo Electric HVDC factory

In 2022, Ofgem announced the introduction of a new Accelerated Strategic Transmission Investment (ASTI) framework.

The ASTI framework streamlined the regulatory approval process and allowed transmission operators earlier access to project funding for a number of priority electricity transmission network upgrades.

This enabled SSEN Transmission and NAtional Grid to award the subsea cable supply contracts for Shetland 2 and Sea Link, two of the offshore ASTI projects, to Sumitomo Electric's new £350 million cable factory under construction in Scotland.

Sumitomo's investment and success in being awarded Sea Link demonstrates how regulatory certainty and accelerated access to funding for transmission owners can support the development of the UK's supply chain cabability, creating 150 high skilled jobs, and support for local businesses and supply chains.

GE Vernova

GE Vernova has announced the expansion of its manufacturing facilities in Stafford, doubling transformer production capacity and creating 100 jobs.

The expansion is aimed at supporting the fast-growing demand for High-Voltage Direct Current (HVDC) transmission systems that will help power renewable energy projects, including offshore wind and interconnectors.

Case studies: Supply chain and manufacturing

Schneider Electric

Schneider Electric has invested nearly £50 million in new facilities and opportunities over the past three years.

It opened a £42 million smart plant in Scarborough that manufactures low-voltage switchgear and will add hundreds of new jobs in the region.

This followed a £7.2 million investment to expand its Leeds manufacturing facility in 2023, which will create more than 100 new jobs.

Winder Power Factory Expansion

A Leeds-based specialist in the design, manufacture, and installation of power and grid transformers – has committed £3.5 million to expand manufacturing capacity at its factory in Leeds.

The decision secures the supply chain for SSEN while also delivering tangible benefits to the wider British economy.

It will create 40 green jobs and help build skills within the clean energy sector. Local people will gain access to high-quality employment, while Leeds strengthens its position as a hub for advanced manufacturing.

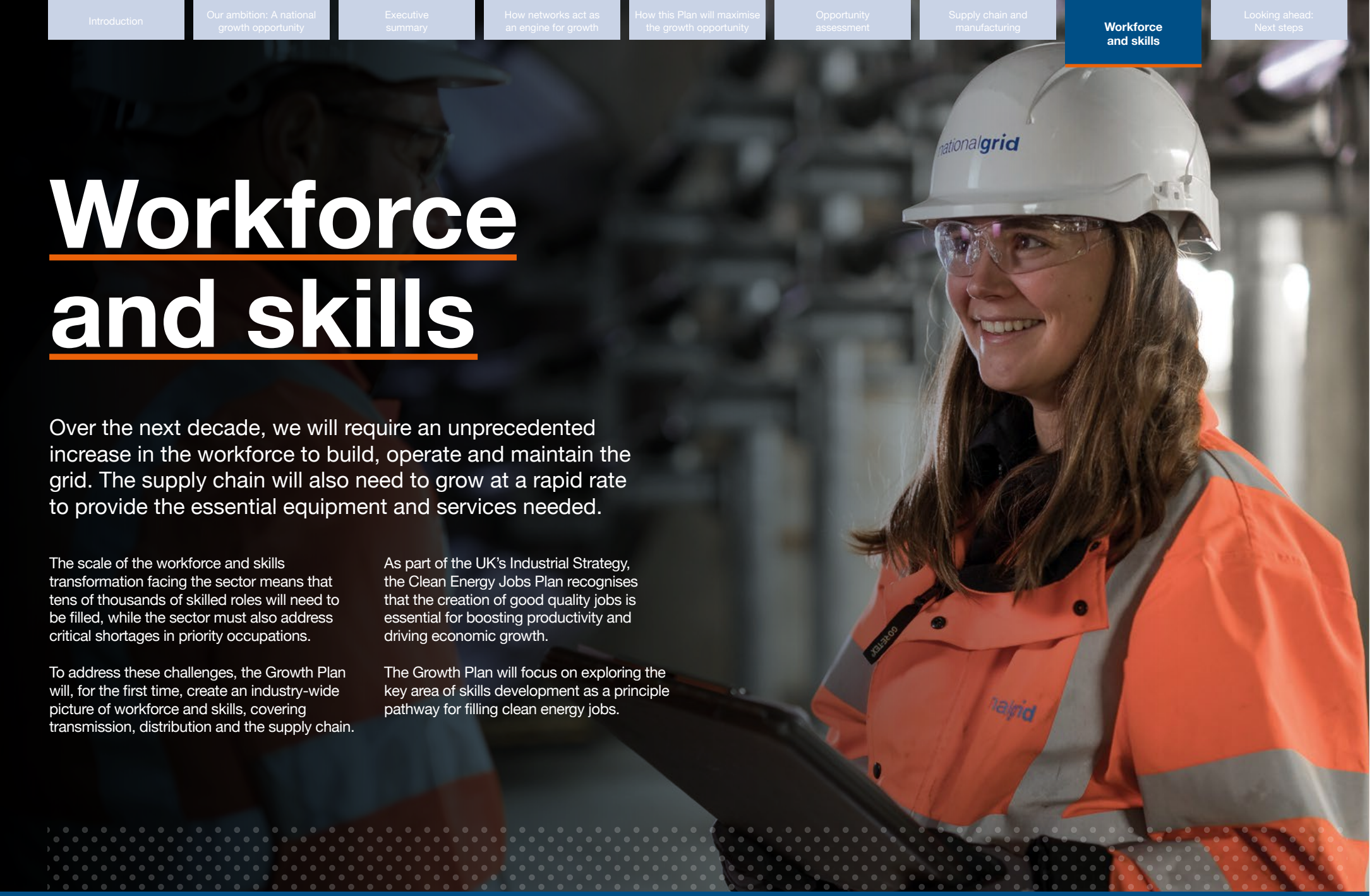
Briggs Marine investment

Thanks to a long-term framework agreement with SSEN to maintain and install subsea cables supplying power to over 60 Scottish islands, Briggs Marine has more than £20 million of planned investment.

Over £7 million has already been spent on UK-built equipment, with a further £3 million planned over the next 24 months.

In addition, 25 new engineering and project staff will be recruited, while eight apprentices and graduates will join each year, adding to the company's 800-strong workforce.

Workforce and skills



Over the next decade, we will require an unprecedented increase in the workforce to build, operate and maintain the grid. The supply chain will also need to grow at a rapid rate to provide the essential equipment and services needed.

The scale of the workforce and skills transformation facing the sector means that tens of thousands of skilled roles will need to be filled, while the sector must also address critical shortages in priority occupations.

To address these challenges, the Growth Plan will, for the first time, create an industry-wide picture of workforce and skills, covering transmission, distribution and the supply chain.

As part of the UK's Industrial Strategy, the Clean Energy Jobs Plan recognises that the creation of good quality jobs is essential for boosting productivity and driving economic growth.

The Growth Plan will focus on exploring the key area of skills development as a principle pathway for filling clean energy jobs.

The opportunity

Reshaping the grid for the future will require a huge expansion in the workforce and skill-base. There is a once-in-a-generation opportunity for industry to come together and set out a clear roadmap to address workforce and skills requirements over the next decade.

The Growth Plan will help to ensure the UK has the right people with the right skills at the right time.

The potential benefits are clear. The chance to create tens of thousands of good quality jobs and long-term career pathways in every region of the country.

Jobs of all skill levels and types will be needed: graduate roles, apprenticeships, roles for people making a career change from other sectors as well as those looking to progress their existing career within the industry.

Estimated total vacancies across electricity transmission, their tier 1 supply chain and distribution by the end of RIIO-T3/ED3

Occupational Group	Transmission Operators	Distribution	Supply Chain	Total workforce
Front Line/Technical	2,445	16,975	18,946	38,366
Specialist Support	1,124	2,490	8,778	12,392
Data/OT/IT Specialists	305	776	1,202	2,283
Managerial	555	776	1,591	3,373
Total workforce	**4,429**	**21,468**	**30,517**	**56,414**

The challenge is multi-dimensional. It is not just about the number of new recruits needed across the sector. Organisations report that it is often difficult to find the capacity to mentor and train new people. The sector is competing for the same talent pool with other high-growth (Industrial Strategy 8) sectors, increasing the requirement to attract new entrants and raise the profile of the electricity networks sector.

There is also the added opportunity that workforce and skills planning is devolved, with the administrations in Northern Ireland, Scotland and Wales having different approaches to that in England.

These challenges apply across the whole sector, both in the regulated network companies and the supply chain – whether that is in manufacturing roles, in service jobs to maintain and renew the network, or in engineering, design and construction.

Findings from a social research study commissioned by DESNZ to understand why early-career students with academic or vocational qualifications chose to pursue a career in the networks sector, or not, has provided useful evidence to inform the development of strategies the sector could use to attract early career entrants.

This research highlighted the need to advertise the wide range of occupations available within the sector, promote role models and raise awareness of the long-term career opportunities across all regions of the UK.

An early part of our workforce planning analysis is the Electricity Transmission Industry Skills and Workforce Planning exercise, convened in November 2024. This exercise brings together Great Britain's electricity transmission companies and their supply chain partners to investigate and address the most pressing challenges facing the electricity transmission workforce over the coming years.

On the distribution networks, many companies engage with the National Skills Academy for Power to produce similar workforce analysis and forecasts of future demand for people.

Barriers to growth

Among the findings of these workforce planning exercises are:

An unprecedented demand for skilled workers

- The industry faces an unprecedented demand for skilled workers, with at least 56,000 vacancies needed to be filled by the end of RIIO-T3 and ED3 periods—a figure driven by retirements, staff turnover, and additional headcounts driven by major infrastructure investment
- Supply chain roles are particularly affected, with the potential to more than double the existing workforce in the central scenario
- Levels of diversity across the networks workforce are low. Just 18% of the technical workforce are female (this reduces even further in the front line technical workforce), while ethnic minorities account for 14%.

Critical skills shortages in priority occupations

- This level of demand, coupled with the demands of adjacent sectors such as infrastructure construction, have the potential to create additional skills shortages – with already one in three vacancies in the sector being difficult to fill because of a lack of applicants with the required skills, qualifications or experience[26]
- The workforce planning analysis already undertaken suggests that there are around 20 priority occupations that will see high demand and be difficult to recruit. These include, including Overhead Linesperson, Site Manager, Control Engineer, HVDC Engineer, Quantity Surveyor, Senior Electrical/Mechanical/Civil Engineers, and Project Managers
- Working to retain the workforce we already have, and will recruit in the coming years, will be crucial to maintaining industry-level and business-level knowledge. Currently, 58% of the workforce started with their current employer five or fewer years ago.

Age profile and succession risks

- The workforce is skewed towards older age groups in a number of key technical and managerial roles, especially in the supply chain, raising concerns about retirement-driven knowledge loss and succession planning
- Nearly 11% of supply chain front line/technical staff are aged 60+, with 5,500 current employees expected to retire by the end of RIIO-T3/ED3 periods
- The occupations particularly affected by a high age profile include: Overhead Linesperson, Multi-skilled Craftsperson, Principal Civil Engineer, Cable Jointer, Senior Data Analyst and Other Principal Engineer.

There is more to do to extend this analysis and understand the extent to which the same challenges apply in the distribution networks and the supply chain – but anecdotal evidence suggests that many of the same challenges can be found in those parts of the sector.

[26]UK Employer Skills Survey, Department for Education, 2024.

What we've done so far

Collaboration across the sector is already under way. One of the most important steps forward is a Memorandum of Understanding (MoU) agreed between the three GB transmission operators to collaborate on skills and workforce planning.

It is part of a wider partnership involving transmission supply chain partners and EU Skills to share knowledge and expertise. More signatories to the MoU are expected to strengthen the collaboration further.

Other activities have included:

- **Competency standards and upskilling:** The Transmission Overhead Line (OHL) working group has finalised competency standards for key roles. Formal Ofqual qualification development is under way. We are using this approach as a template for other critical skills. TO critical skills working groups are reviewing upskilling opportunities to support professionals moving over from other industries
- **Innovative ways of working:** Preparing a report on the opportunities and barriers to innovative ways of working on projects, with use cases and recommendations
- **Our workforce research and sector analysis has informed the Energy & Utility Skills (EU Skills) 2025–2030 Skills Strategy.** This has ensured that all aspects of the energy and utilities landscape were considered, alongside the specific issues facing devolved nations and individual industries. Four strategic pillars were identified, each setting out targeted actions to address critical workforce challenges – Research, Attract, Train and Retain.

What we will do through the Growth Plan

Our analysis of workforce and skills to date has focused on the transmission sector. As part of the Sector Growth Plan, we will extend this to cover both distribution and wider supply chain – undertaking a comprehensive review of the workforce and skills requirements for the whole sector. This will include a detailed picture of the make-up of the existing workforce, critical skills shortages and actions needed to create a strong pipeline of skills for the future. We will engage with a broad variety of stakeholders, including seeking input from trade unions.

Among the activities over the coming months, we will:

- Create a joint Networks Workforce Programme: Build a transmission and distribution workforce programme aligned with the needs of transmission operators, distribution operators and the supply chain
- Map skills challenges: Agree participation of TOs, DNOs and suppliers in a joint Networks Workforce Planning report
- Agree and implement a sector attraction campaign to increase sector visibility
- Support the development of cross-industry competency passports for sector roles and expand occupational mapping and standardisation of skills and competencies to enable greater sector mobility
- Define and implement shared training initiatives for the sector and supply chain partners
- Explore opportunities for curriculum development with colleges and universities
- Investigate options for effective talent and knowledge retention programmes
- Bring this analysis together into collaborative work programme to deliver the workforce and skills requirements for the sector.

Case studies: Workforce and skills

Clancy Group's training academy

Civils and services engineering company Clancy Group has invested in a new training academy to build the skills needed for Britain's once-in-a-generation grid expansion. The academy provides facilities for overhead line and pole training, as well as plant and heavy machinery simulation – equipping employees with the expertise to meet rising energy demand. The academy underpins Clancy's ambitious growth plans. Over the past 14 years, the company's energy division has grown from zero to 800 employees, with a target to recruit 300 more staff in the next year. Clancy also aims to expand its apprenticeship programme to 100 places, ensuring a pipeline of skilled workers ready to deliver critical services and infrastructure for UK DNOs.

Hitachi Energy Operational Campus

Hitachi Energy is investing more than £20 million in a new Operational Campus in Staffordshire, retaining around 400 skilled employees and creating hundreds of additional roles over the next decade. The investment will strengthen the UK's manufacturing base to keep pace with transmission and distribution networks, which are expected to at least double in capacity this decade. Due to open in 2026, the campus will unite engineering, digital innovation, and training teams in a sustainable environment that builds a long-term talent pipeline. At the same time, redevelopment of the former site into 114 new homes will ensure local residents also benefit from growth.

UK Power Networks Apprenticeships Investment

UK Power Networks is investing £6 million in craft apprenticeships, creating 55 new roles to support local communities and Britain's clean energy transition. Based across London, the South East and East of England, recruits will help maintain and upgrade the electricity network that serves 20 million people, connecting more renewable energy, electric vehicles and heat pumps. One apprentice, Daniel, served around the world in the British Army's Parachute Regiment for six years, followed by three years in the telecommunications industry. "Working at height is a real draw - I'd rather have my office up a pole than sitting at a desk. I value the technical side of the job. Breaking into the electricity distribution sector and becoming a skilled craftsperson gives me real purpose."

SP Energy Networks Dealain House

Scottish Power's Dealain House training hub is set for a multi-million-pound modernisation, creating a new centre of excellence for apprentice and graduate engineering training, as well as a fast-track route for skilled workers moving into the sector. Once complete, the facility will double in size, with capacity for 28,000 delegates and 305,000 training hours each year across more than 30 classrooms, workshops, and event spaces.

M Group Energy Training Programme

M Group Energy has teamed up with National Grid, City & Guilds and the Department for Education to develop a bespoke line-worker training programme, supporting the increased focus on renewable energy and electrification. So far, 113 people have completed the training across four cohorts. This programme is part of a wider initiative by M Group Energy to invest in people and create new career pathways. Alongside the line worker skills bootcamp, the business has trained more than 100 apprentices and recruited over 400 ex forces members – 90 of whom have joined the energy sector.

Case studies: Workforce and skills

SP Energy Networks: EMPower

SP Energy Networks has launched a 12-month training and development initiative, EMPower, that supports ex-forces personnel to skill up for new careers in the organisation.

The first cohort of 11 veterans from the British Army and Royal Navy are using existing skills, leadership experience and operational discipline to transition to roles in project management, cyber security, and quality and technical support.

The programme has been delivered in collaboration with the Forces Transition Group.

Siemens Power Academy

Siemens Power Academy's UK operations are centred in Hebburn, North East England, but its reach is national, supporting workforce development across the country. Training is delivered flexibly: at Siemens' state-of-the-art centres, on customer sites, or virtually. The Academy collaborates closely with UK universities—including Newcastle, Sheffield, Nottingham, Manchester, Cambridge, Oxford, and Birmingham—to align training with academic curricula and foster industry-academic partnerships. It also works with industry bodies such as BEAMA and the Energy Networks Association (ENA), and supports Government initiatives like 'Made Smarter' to drive digital adoption and lifelong learning. Recent investments include a £1 million testing facility in Hebburn, providing a safe environment for engineering development and hands-on training.

Case studies: Workforce and skills

Grace Ayres career switch

Demand for skills is only set to grow, but training and flexible, meaningful careers are on offer across the country. Grace Ayres joined Northern Powergrid in January 2025 as an EHV design engineer after a decade teaching secondary school maths.

Her career switch shows how networks are innovating to attract talent beyond traditional engineering pipelines. She said "Leaving a profession that you've built up… it's quite a big step to take. I think it's just being aware that the risk is worth taking."

Grace wanted a career offering flexibility and long-term prospects. A Northern Powergrid advert for STEM career changers caught her eye: "I wasn't entirely sure what I was even applying for… but the big thing for me was flexible work and being part of something like net zero."

Northern Powergrid backed Grace's transition with structured training, including EA Technology courses and an Introduction to Power Systems at the University of Strathclyde. Grace is now championing STEM careers, returning to her former university to inspire maths graduates to consider energy roles.

"It's nice to be part of something that's changing for the good… I'd recommend it to anyone."

SSEN Arborist Apprenticeship Programme

In September 2023, we established SSEN Distribution established its first utility arborist apprenticeship programme, recognising the critical role arborists play in safeguarding the electricity network.

Arborists carry out essential work every day, cutting back vegetation and maintaining trees to ensure electricity cables and lines are clear. This work is not just about maintaining critical infrastructure – it is about keeping the lights on for millions of homes and businesses, enabling communities to function and thrive.

Lucy joined the arborist apprenticeship programme as part of its first cohort. Coming from a retail background with no prior arboriculture experience, Lucy embraced a significant career change and quickly demonstrated determination and a strong work ethic.

Her journey reflects how this profession opens doors for people from all walks of life, offering them the opportunity to develop specialist skills that are in high demand and will remain essential for years to come.

As Lucy continues her career, she strengthens SSEN's future workforce, helping secure long-term business growth, supporting sustainability, and demonstrating how arboriculture offers a career with purpose, impact, and opportunity. Each apprentice steps into the industry with no experience and emerges as confident, capable professional arborists.

Their success reinforces SSEN's commitment to nurturing future talent and highlights how a career in arboriculture is not only personally rewarding but also vital to society's everyday functioning.

Looking ahead: Next steps

Investment in the electricity networks sector presents the UK with an unparalleled national growth opportunity. A unique chance to harness the transformation of the nation's electricity grid to be an engine for UK economic growth and prosperity.

Against this backdrop, the whole sector is committed to work collaboratively with Governments and Ofgem over the coming months to maximise the contribution of the sector to the UK growth story.

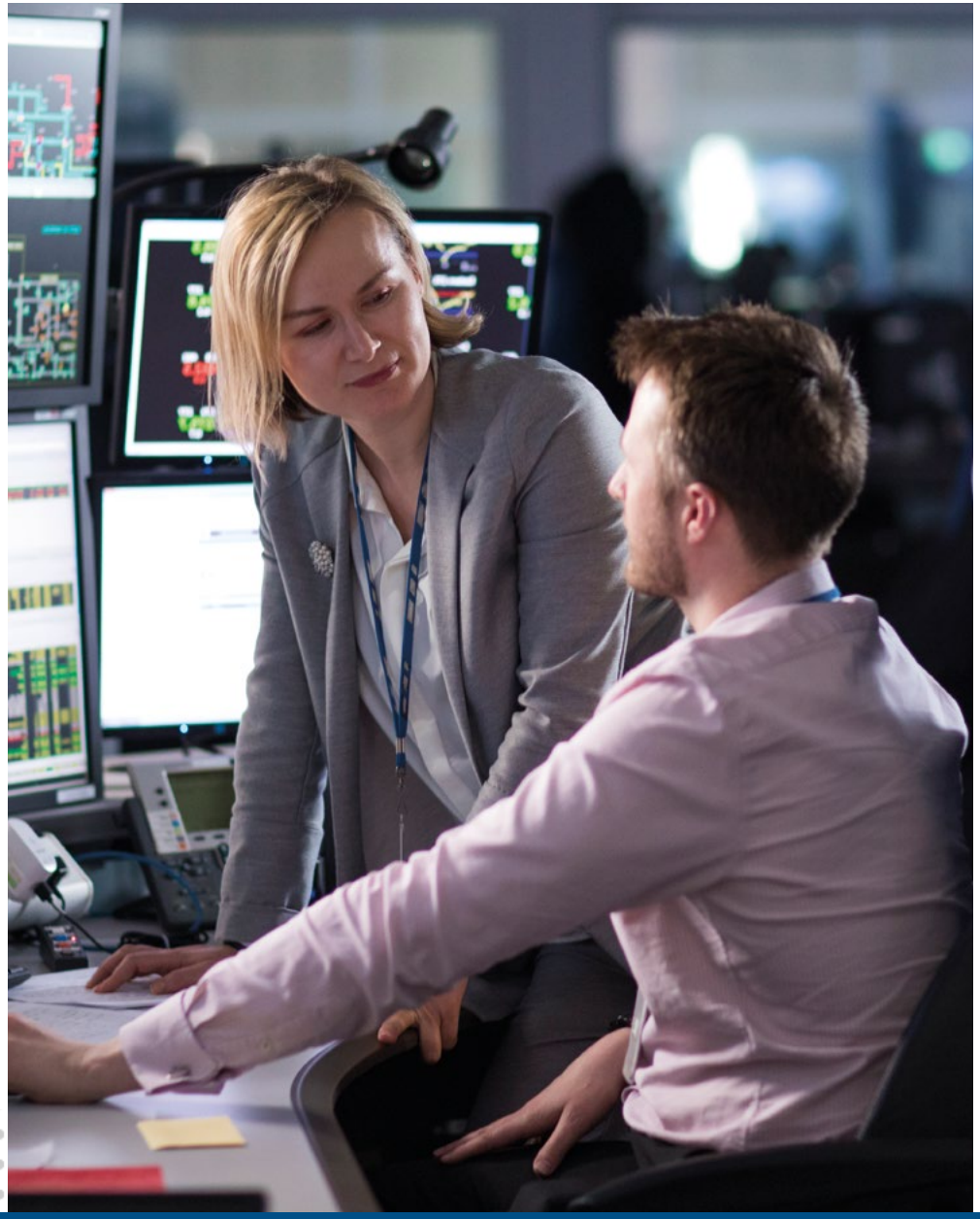
The publication of this Interim Report marks the first step. The work we've done so far is a launchpad for what comes next – the deep sector-wide analysis that will inform the full Electricity Networks Sector Growth Plan, to be published in summer 2026.

This work will deliver:

A comprehensive economic and supply chain analysis to quantify the economic opportunity stemming from network investment.

An action plan to support the growth of the UK supply chain and to strengthen domestic manufacturing capability.

A collaborative work programme to deliver workforce and skills requirements for the whole sector, covering transmission, distribution and the supply chain.



The work has already begun. We look forward to sharing the outcome next year, ensuring that the ambition of our response meets the scale of this once in a century opportunity for growth.

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Electricity Networks Sector Growth Plan: Interim Report