



Delivering today



Adapting for tomorrow

UK POWER NETWORKS ANNUAL REVIEW 2022/23



WHO WE ARE

This UK Power Networks Annual Review covers the regulatory year 1 April 2022 to 31 March 2023

We are UK Power Networks

In this report

We are the UK's biggest electricity distributor, ensuring that the electricity infrastructure is in place to serve our customers safely, reliably, efficiently and sustainably.

We operate in London, the East and South East of England, serving 19 million people in an area of over 29,000 square kilometres. We are tackling climate crisis by helping to make sure our network is ready for the increase in EVs and other low carbon technologies.

We aim to meet our customers' evolving needs by improving our services, particularly supporting those in vulnerable circumstances. These are our priorities and we go above and beyond to achieve them on behalf of the communities we serve.

Our business units

Eastern Power Networks (EPN)

We deliver power to the East of England region which extends from the Wash in the east, to North London and the Thames estuary, encompassing a diverse range of urban and rural areas as well as a huge coastline.

99,080 km
EPN network length

London Power Networks (LPN)

We look after the electricity network for people who live and work in Inner London, including the responsibility for delivering power to iconic buildings and businesses, as well as high-profile international events throughout the year.

37,685 km
LPN network length

South Eastern Power Networks (SPN)

We serve South London, Kent, East Sussex and parts of Surrey and West Sussex, covering a rich variety of customers and locations.

53,573 km
SPN network length

Delivering today...

0.04m

heat pumps connected on our network

0.4m

electric vehicles (EVs) connected on our network

0.5 GW

Battery storage connections on our network

10.1 GW

distributed generation connected on our network



...adapting for tomorrow

0.7m

heat pumps to connect to our network by 2030

Over 5m

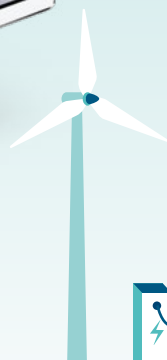
EVs to connect to our network by 2030

5 GW

battery storage connections by 2030

17.2 GW

distributed generation on our network by 2030



Visit our Annual Review website: annualreview2023.ukpowernetworks.co.uk



UK Power Networks Services
UK Power Networks Services is the commercial arm of UK Power Networks that manages private energy networks and delivers major national power infrastructure projects for customers on a competitive, commercial basis.

WHAT WE DO

Delivering today...

We own and maintain electricity cables and lines across London, the South East and East of England and make sure power flows reliably, safely and securely.

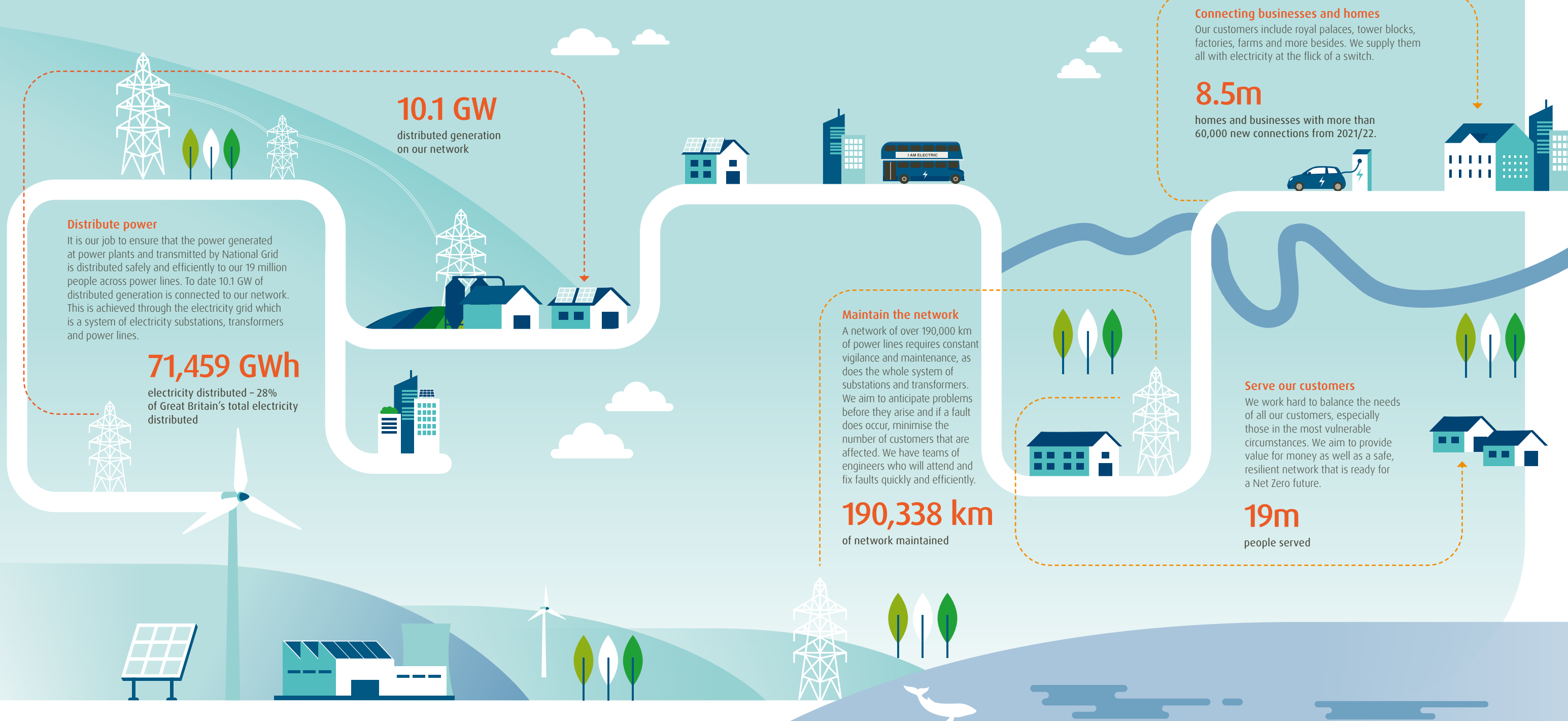
We keep the lights on, safely and sustainably, at the same time taking good care of our customers across our communities, especially those in vulnerable circumstances.

Combining ground breaking innovation and rigorous economic discipline, we provide a service that provides the industry's best customer satisfaction level of 94% at a cost that is 8% lower than all our peers.



> Find out more about how we are Delivering today and adapting for tomorrow at annualreview2023.ukpowernetworks.co.uk

How we deliver today...



WHAT WE DO

...adapting for tomorrow

We are a leading infrastructure provider, helping to build a smarter, more dynamic electricity network fit for a Net Zero carbon future as we deliver power to 19 million people living across our region.

We're actively working with industry and policymakers to facilitate the change. We are also connecting ever-greater volumes of low carbon generation at an unprecedented pace to support sectors such as transport and domestic heating to decarbonise through electrification. Our whole systems approach places collaboration at the heart of what we do so we can deliver benefits to society and support the Net Zero transition.

Our future network priorities

- Facilitate cheaper and quicker connections using proven innovation
- Use customer flexibility as an alternative to network upgrades
- Develop enhanced Distribution System Operator capabilities
- Collaborate with industry and others to enable nationwide benefits
- Prepare and facilitate the uptake of EVs

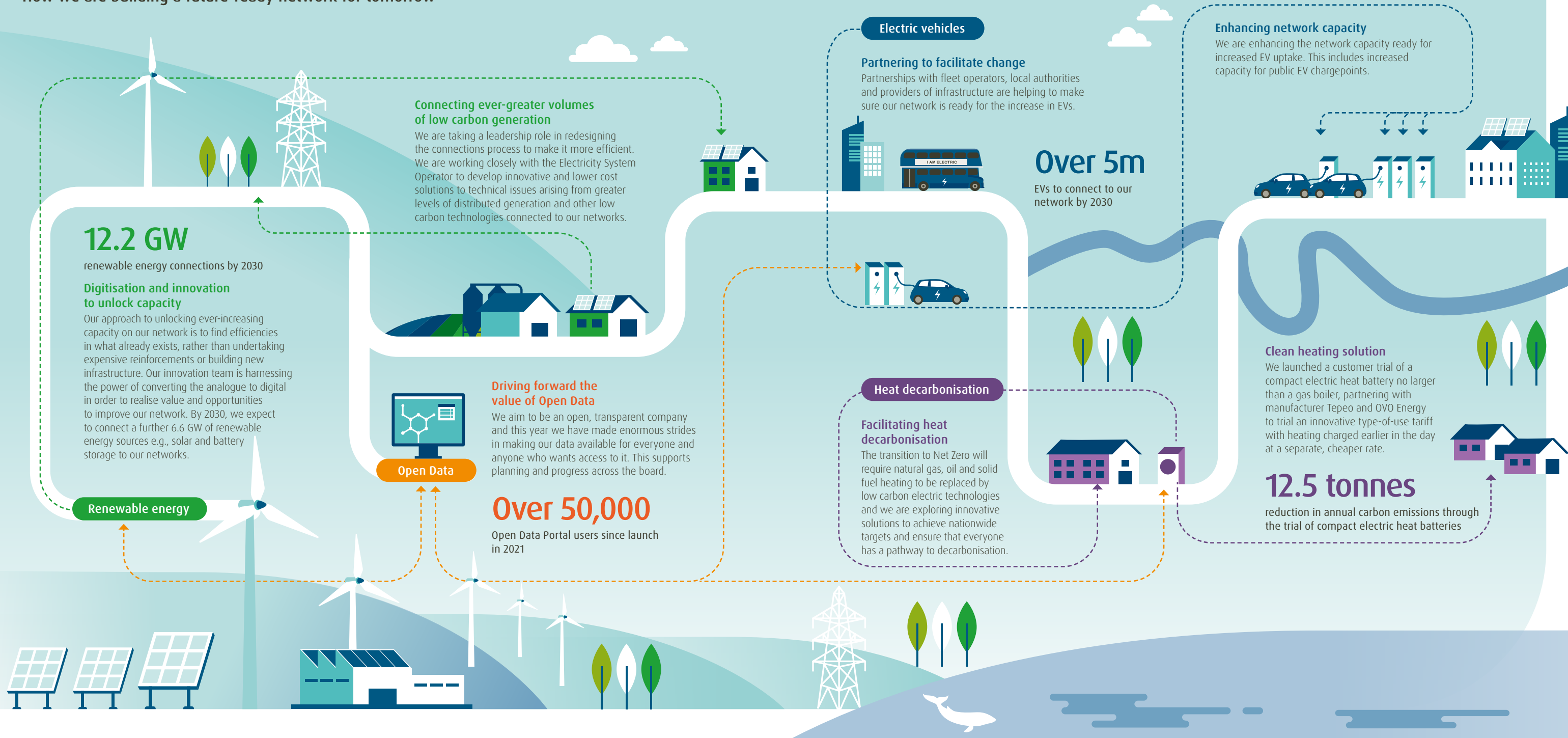
Read more about our Distribution System Operator [here](#)



The role of Distribution Network Operators (DNOs) is evolving. A smarter, more flexible electricity network is key to reaching the government's Net Zero target by 2050, working collaboratively to create solutions and build a smart grid that will deliver a Net Zero future for all."

Sotiris Georgiopoulos
Director of Distribution System Operator

How we are building a future-ready network for tomorrow



A MESSAGE FROM OUR CEO

Building a smarter, more dynamic electricity network

“

We are the leader in our sector across all key performance metrics; we are widely regarded by Ofgem and our key stakeholders as the frontier performing distribution company.”

Basil Scarsella
Chief Executive Officer, UK Power Networks



2022/23 has been dominated by the war in Ukraine and the aftermath of the COVID pandemic which has resulted in the highest inflation for decades precipitating a cost-of-living crisis. At UK Power Networks we are acutely aware that every pound we spend goes on our customers' bills. Our laser-like focus on minimising our expenditure while delivering the safest, most reliable electricity network supported by industry-leading customer service has never been more important.

2022/23 was a significant year for UK Power Networks. It was the final year of the current eight-year regulatory contract, known as R110-ED1 and, as such, it presented us with an ideal time to reflect on our performance over those years. It was also an opportunity for us to take a long-term look to the future, as it was the year in which we agreed our new five-year regulatory contract with our regulator, Ofgem. R110-ED2 will run from April 2023 to March 2028.

Looking back over the last eight years, I am extremely proud of the performance that we have delivered. We are now the leader in our sector across all key performance metrics; we are widely regarded by Ofgem and our key stakeholders as the frontier performing distribution company. This recognition is a testament to the professionalism and dedication of all our staff.

Our long-term vision for the future at UK Power Networks is to continue to serve and be embedded in the communities in which we operate at the same time as continuing to lead the way on the journey towards a Net Zero carbon future.

Nevertheless, in the midst of this strong performance, we were sharply reminded of the inherent dangers of our industry. In January 2023, an employee was fatally injured while working on the electricity network. This devastating loss affected all employees of UK Power Networks but particularly his immediate work colleagues. Our thoughts and sympathy remain with his family and friends. This incident reinforces that we can never take the safety of our colleagues or the public for granted and must always have it front of mind.

This loss is undoubtedly the defining event of the year under review; nevertheless our performance in other areas remains strong. We have achieved our best ever level of Customer Satisfaction of 94% and have been consistently ranked in the top five in the Institute of Customer Satisfaction survey alongside household names such as John Lewis.

We also outperformed our network reliability targets, but we did not deliver the level of performance we expect in this regard. We have reviewed our investment strategy in this area and we will be deploying more new technology that will help improve the reliability of our network.

A key focus for UK Power Networks is how we support the country's transition to Net Zero. Our role is to ensure that there is sufficient electrical network capacity for customers to connect low carbon technologies such as EVs or renewable generation. As ever, we are bringing our most creative minds to bear on this challenge and continue to push the boundaries of power distribution technology with our ground-breaking innovations that you can read about in this report. We are working with government, Ofgem and the rest of the industry to ensure any barriers to their connection are removed.

Our employees are the reason for UK Power Networks' success, and we work hard to recruit and retain the best talent. We are delighted that the outside world has recognised this. We retained our status as a platinum IIP company, which only 5% of organisations in the world achieve, and we ranked second in Q1 2023 Best Big Companies to Work For list. In addition, for the first time, we have become Britain's Most Admired Company for the Energy Distribution & Supply sector from a survey conducted by Echo Research in partnership with Coventry University. This is a tremendous achievement and reflects the commitment of our employees to deliver the industry-leading performance that you can read about in this report. I am grateful to everyone at UK Power Networks for all that they have done and continue to do.

Basil Scarsella
Chief Executive Officer

Highlights of the year

2022/23 was a year of good performance across majority of our key performance metrics. UK Power Networks took leading positions in terms of value for money, customer satisfaction and stakeholder engagement, all the while achieving 99.99% network reliability.



Frontier performing DNO



No.1

Awarded the best performer in Ofgem's Broad Measure of Customer Satisfaction with our best ever customer satisfaction score of 94%

99.99%

Network reliability

No.1

Ranked number one in the UK for smart grid capabilities in the Singapore Power Group's Smart Grid Index.

Lowest cost DNO

across the eight-year period of R110-ED1 (2015/16 - 2022/23). This means our customers paid us an average monthly charge of £8.04 (27p per day) which is 8% less than the industry average.

No.1

Ranked No.1 DNO for stakeholder engagement and consumer vulnerability for fourth year in a row



OUR BUSINESS MODEL

How we add value

OUR RESOURCES AND RELATIONSHIPS

Physical

The smooth delivery of our service requires efficient, state-of-the-art equipment. We collaborate innovatively with the leading suppliers of such equipment to ensure that all aspects of our resources and infrastructure are fit for purpose to provide a safe, reliable service to our customers.

Our people

It is the people who make UK Power Networks what it is. We value every person who works for the company. We want people to enjoy working with us and we do our best to provide a fair and inclusive environment that offers opportunities and satisfaction to everyone.

Social and relationships

We provide an essential service that customers and communities rely on in their daily lives. We take our social responsibilities, including supporting our customers in vulnerable circumstance, very seriously. We are also part of a wider interconnected energy system going through enormous change. We can only take meaningful action by working with others to shape the way forward.

Intellectual

Innovation is our lifeblood and it drives us forward. Over many years we have built an innovation team that has developed ground-breaking tools, techniques and systems that have transformed our business and our industry. The intellectual property and culture of UK Power Networks is vital to our success.

OUR STRATEGIC PRIORITIES

Keeping employees and the public safe



Providing a reliable electricity supply



Focus on customer satisfaction



Delivering value for money



Innovating to facilitate the transition to Net Zero



WHAT MAKES US DIFFERENT

Clear vision and purpose

Everyone working for UK Power Networks knows what our vision and purpose are and understands their role in achieving them. Throughout the business, we set targets with incentives that mean we are all working together in pursuit of the common goals that we all recognise.

A safe, reliable, resilient network

UK Power Networks has proved to be the country's most reliable Distribution Network Operator (DNO). We have outperformed the Ofgem targets by 30% for both customer interruptions (CI) and customer minutes lost (CML) in 2022/23. We are also judged the safest DNO in terms of the industry's key measure of Lost Time Injuries in eight of the last ten years.

Our employees

We have built a unique performance culture at UK Power Networks that strives for continuous improvement and has, at its heart, the ambition to deliver satisfaction for our customers in ways that break the boundaries of our sector. In our culture, it has become second nature for our employees to put themselves in our customers' shoes. Diversity and inclusion are deeply embedded in our culture and we support our employees by creating a workplace environment where they can learn, improve and deliver brilliant performance. That's just some of the reasons we have featured in the 25 Best Big Companies to Work For, for the last nine years.

Customers at the heart of our business

Our business takes every opportunity to see the world from our customers' point of view. This year, our customer service measure reached 94% and, once again, Ofgem ranked us as the number one DNO for customer satisfaction. We have remained in the top five of the Institute of Customer Services quarterly ranking of customer service providers across all companies in the UK since 2022.

Transparent and accountable

As a monopoly provider of an essential service, UK Power Networks is committed to being transparent to anyone who seeks to understand us; we welcome such scrutiny. We are happy for all our stakeholders, and particularly our customers, to be able to look closely at all aspects of our business.

Value for customers' money

We are acutely aware that our customers cannot choose their electricity distributor, therefore we take great care to provide them with the best possible value for money. Finding ways to save our customers' money is always at the forefront of our thinking. UK Power Networks' annual domestic charges are at £98.46 per annum which is 8% lower than the industry average.

Always innovating

We innovate in order to make our service more reliable, more affordable, cleaner and safer. Every day we bring new ways of working to our service, like high-tech solutions to the challenges of Net Zero or a fresh approach to customer communications and stakeholder engagement.

THE VALUE WE CREATE

Partners

236

active partners, with 82 new partnerships this year

Customers

Ranked 3rd

Ranked 1st in July 2022 and 3rd in January 2023 survey of best customer service providers by the Institute of Customer Service (ICS) across all UK industries

Communities

341,000

customers in off-gas grid communities could benefit from our coordinated approach to decarbonise heating

Colleagues

Ranked 2nd

in the Best Big Companies to Work For list in Q1 2023

Governments and non-government organisations

71 local authorities

This year, we held 13 regional engagement sessions covering 71 local authorities to discuss our future energy scenarios.

> See operational performance on page 30
> See stakeholder engagement on page 10

THE BENEFITS WE CREATE FOR...



Environment

Supporting the UK's transition to Net Zero

> See page 20



Our employees

Attracting and retaining the best people

> See page 24



Social responsibility

Working for a fairer society

> See page 26

STAKEHOLDER ENGAGEMENT

Putting ourselves in our stakeholders' shoes

Understanding and meeting our stakeholders' needs is crucial to our business.

This includes supporting those at greatest risk of being left behind, for reasons such as cost, accessibility and awareness. As a monopoly provider of a vital service, we are committed to doing all we can to put ourselves in our stakeholders' and customers' shoes so we can understand their priorities and act in accordance with their best interests.

The cost-of-living crisis is an enormous strain on most people; at the same time, the climate emergency is not going away. We have a key role to play in ensuring the network is ready for the energy transition and all our customers are able to benefit.

31,612

customers

received fuel poverty support through our delivery partners (double the number supported last year)

236

active partners

supporting customers in vulnerable circumstances with 82 new partnerships this year



Our key stakeholders

How we engage

Key outcomes of engagement

Partners



We engage with partners with complementary capabilities, expertise and capacity to design and deliver initiatives and services that benefit our customers.

- Expert panels and councils provide insight into strategic issues
- Forums, workshops, events and conferences
- Collaboration to design and deliver initiatives
- Training and upskilling

- Launched a single, GB-wide [website](#) to provide extra support during power cuts
- Scaled up the Priority Services Register (PSR) data sharing with five additional water companies in our area, taking the total to seven out of eight, so more customers receive the support they are entitled to
- Scaled up our support for customers in fuel poverty in collaboration with local authorities and other utilities in our regions
- Developed a Home Action Plan, supporting lower income households to access the benefits of low carbon technologies.
- 88% of customers rated the Home Action Plan as useful during testing, with 56% intending to make changes as a result

Customers



We engage with customers to understand their evolving needs and develop services and initiatives that meet them.

- Customer research, including surveys, focus groups, and our online inclusive customer panel and Small and Medium Enterprise (SME) panel
- Forums, workshops and events
- Feedback on customer experience
- Involving customers in trials
- Targeted campaigns, for example, to encourage customers who are medically dependent on electricity to have a smart meter installed, so we can offer them enhanced support during a power cut and help them take advantage of smart energy services.

- Doubled the number of customers receiving personalised fuel poverty support this year to 31,612
- 67% of eligible customers are now registered on the PSR, an 11% increase on last year
- Adapted our support to reflect changes in customers' hour-by-hour needs during a power cut
- Improved PSR data quality from 91% to 97% through developed data improvement framework, focusing on completeness, consistency and quality
- Learned about flexibility participation barriers faced by hard-to-reach customers, to design more inclusive services
- Trialled credit meter fuel vouchers for customers with disabilities

Communities



We engage with local authorities, community energy groups and politicians to understand what they need from us to best serve their communities, from delivering Net Zero in their local areas to providing support during major disruption.

- Workshops, training and information sharing with local authorities
- Regular meetings and site visits with politicians
- Community events
- Discussions with community energy groups
- Involvement in trials
- Indirectly via organisations representing community interests

- Scaled up local authority community initiatives by adding £200,000 in matched funding
- Developed a framework and dedicated support to help local authorities deliver their Net Zero ambitions. Seven of them progressed Local Area Energy Plans as a result of our support this year
- Developed a free online energy planning tool to support local authorities in shaping their local decarbonisation plans. This is forecast to enable £1m resource efficiency savings for local authorities across our regions over five years
- Highest ever (13%) growth in number of customers on the PSR in London, following our campaign to target the area

Colleagues



We engage with our employees to understand what matters to them in their work in order to be able to attract and retain a talented, happy workforce.

- Engagement surveys
- Fortnightly CEO video updates to staff
- Internal publications including magazines, podcasts, newsletters and campaigns
- CEO staff forums
- Ongoing training and development
- Contractor/Supply chain forums

- Ranked No.2 in the Best Big Companies to Work For list in Q1 2023
- One of only 5% of companies worldwide with Platinum status with Investors in People (IIP)
- Ranked 6th in the Inclusive Top 50 UK Employers list
- 81% of those graduating from Leadership Academy awarded a distinction
- Awarded Britain's Most Admired Company for the Energy Distribution & Supply sector following a survey conducted by Echo Research in partnership with Coventry University
- Achieved the Chartered Institute of Procurement & Supply (CIPS) accreditation – only DNO and one of only 16 companies internationally that has been awarded Platinum.

Helping local authorities to plan for the climate emergency

In 2022/23 we ramped up our engagement with local authorities recognising the resourcing challenges they faced with their Net Zero planning. We established a dedicated Local Net Zero Team to support local authorities in developing robust local decarbonisation plans to deliver on their ambitious Net Zero targets. We have shaped our support through extensive engagement with local authorities across our regions, including surveys, one-to-one discussions and regional engagement events.

In March 2023 we launched a prototype of our Local Net Zero Hub. This free online hub has been designed working closely with local authorities to support their journey through local area energy planning, recognising they need additional support to access and interpret key data. It gives local authorities access to a raft of datasets to support their local decarbonisation plans, ranging from wind speeds, flood zones and socio-economic data to electricity network maps and information showing where there is spare electrical capacity. Having truly open, local data brought together in one place, grouped by six key planning themes, will help local authorities understand where to start and what factors they need to consider to deliver Net Zero quickly and cost-effectively.

“UK Power Networks' new platform brings everything together and will transform how we work. It is easier than ever now to plan how we can unlock the potential benefits of Net Zero electricity for our community.”

Nick Adlam
Lewes & Eastbourne Councils
[View Your Local Net Zero Hub](#)

ENERGY SECTOR REVIEW

An energy sector for the future

The energy sector is going through a period of massive disruptive change in terms of technology and society.

New technologies, such as battery storage, EVs and network flexibility, are changing the face of the energy sector. Customers no longer rely solely on centralised energy generation to meet their electricity demands. We are seeing increasing volumes of smaller distributed generation and low carbon technologies being connected to the network. Global ambition will only intensify for a clean energy transition delivering Net Zero with energy security and affordable prices.

GLOBAL INSTABILITY

The war in Ukraine

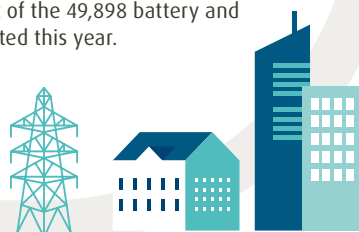
The war in Ukraine has sharpened the focus on the security of energy supply, including the risk of rolling planned power cuts, and on the role decarbonisation could have in delivering energy independence. It has added urgency to the drive to achieve Net Zero by 2050. Connecting more low carbon electricity more quickly is a top priority, particularly in light of the cost-of-living crisis customers are facing, along with the highest level of inflation for 40 years. These circumstances, combined with rising energy prices, are driving changes in customer behaviour; those who can afford to do so are rapidly adopting domestic low carbon technologies (LCT) to manage their energy bills and there is a danger that those who cannot could be left behind. UK Power Networks is doing its best to minimise that gap by working to make the low carbon economy accessible for everyone.

How we are responding

With the rise in energy costs, applications for domestic battery and solar installations increased almost threefold. We found we could accelerate combined solar and battery installations by increasing the individual connection threshold without compromising the network, allowing more installations to be auto-approved via our portal. We trained solar and battery installers on our self-service portal and introduced processes to increase auto-approvals and so avoid extra cost and delay. The portal enables LCT applications to be assessed and approved automatically, accelerating installations by up to 10 days.

38,800

households expected to benefit from up to 61% lower electricity bills as a result of the 49,898 battery and solar installations supported this year.



INDUSTRY REGULATION

A regulatory framework for the delivery of Net Zero

Facilitating the UK's Net Zero carbon emissions target is central to our business plan. As more and more major industries are switching from fossil fuels to electricity, we are at the heart of the change by providing the infrastructure to help these industries facilitate change. This requires a radical departure from the current Distribution Network Operator (DNO) model which has been in place for many decades. In the current structure under Ofgem, DNOs are incentivised to build assets on the network and we are conscious that such solutions to constraints on the network are not always in the customers' best interests. A new regulatory framework is required to address the inherent tension in the status quo and we are working with Ofgem to create one.

How we are responding

We have created an independent Distribution System Operator (DSO), whose key role is to find the most cost-effective and sustainable way of expanding the capacity of the network while maintaining focus on our core responsibility of keeping the lights on. For example, a neighbourhood might be seeing an increase in the volume of EVs meaning additional capacity will be required. The traditional response from a DNO would be to invest immediately in new infrastructure. A DSO, on the other hand, challenges that decision and proposes buying flexibility to increase the capacity of the network.

1.5 GW

In 2022/23, UK Power Networks has awarded 1.5 GW of flexible contracts to distributed energy resources and aggregators to increase demand or turn down supply during periods of excess power.



CYBER SECURITY

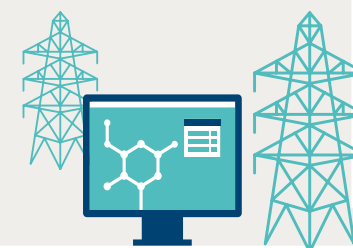
Safeguarding and protecting national infrastructure

Our Corporate IT and Industrial Control Systems are essential to the operation of our networks and the supply of electricity. Our increasing dependence on technology and devices also substantially increases the opportunities and potential entry points for cyber attacks. Our ability to detect and respond to a cyber attack is therefore vital and our focus remains on continually improving our cyber resilience. Given that the region we serve includes the capital city, financial centre and home of the UK Government, we regard regulatory requirements as a minimum standard to manage the cyber threat.

How we are responding

We are continually improving our resilience to sophisticated cyber attacks and we comply with the Network and Information Systems Regulations 2018 through the National Cyber Security Centre (NCSC) Cyber Assessment Framework. We do this to protect our networks, secure our customer data, and keep the public safe.

We have an effective communication programme on cyber attack awareness for our employees, including periodic random tests to identify weak spots. We have seen a steady improvement in the awareness of the subtlety and methods of cyber attacks and a resulting rise in caution among our employees and supply chain. Our dedicated cyber resilience programme ensures we are building the muscle memory to respond quickly to potential cyber threats. This includes quarterly cyber crisis exercises that simulate a cyber attack such as ransomware, in which we rehearse and refine the response throughout the business. The speed of response can be crucial for limiting the impact of cyber attacks, so we also regularly update and test the processes that isolate access to core operational technology within minutes of a credible threat.



TACKLING CLIMATE CHANGE

Driving decarbonisation through local collaboration

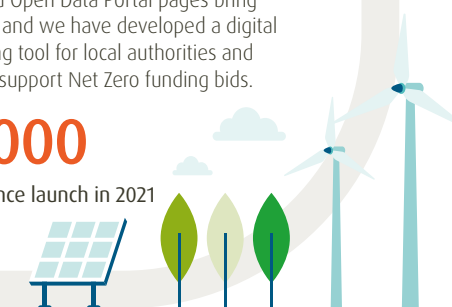
Accurate forecasting of future demand for electricity, including demand driven by decarbonisation, is vital to the efficient planning of where and when to invest in our network. Local authorities have a key role to play in delivering Net Zero by influencing over 80% of the UK's carbon emissions, according to the Climate Change Committee, and are mandated to develop robust plans to deliver their ambitions. Ninety percent of local authorities in our regions aim to reach Net Zero before the national 2050 target; a 23% increase on last year. However, our engagement with these stakeholders over several years has highlighted multiple challenges; lack of resources and expertise, the need for data to model different Net Zero pathways, and the need for analytical and spatial mapping capability to use that data.

How we are responding

We work closely with local authorities to tackle these barriers and provide support to enable them to develop plans that furnish us with a robust evidence base on which to plan network development. Our ring-fenced Local Area Energy Planning team and support model have been designed with local authority needs in mind. Our tailored Open Data Portal pages bring together relevant datasets and we have developed a digital self-service energy planning tool for local authorities and collaborated with them to support Net Zero funding bids.

Over 50,000

Open Data Portal users since launch in 2021



RELIABILITY AND QUALITY

Ensuring network resilience

Energy security risks, with the potential for planned rolling power cuts, along with growing reliance on electricity for transport and heat mean that resilience is now a greater concern for customers. We need to understand future demand on the network and provide capacity quickly, efficiently and at low cost. When customers experience disruption, we need to work quickly and collaboratively with a range of stakeholders across our regions to minimise the impact on their day-to-day lives.

How we are responding

We respond to the need for organisational resilience by being vigilant, continually scanning the horizon to identify and avert potential threats. For example, we are learning more and more about the effects of extremely high temperatures on a power network and are taking steps to reduce their impact. This year we saw the threat of global energy shortages and in response we made detailed plans for scheduled disconnections; thankfully these were not needed. Having a team dedicated to organisational resilience means we are able to step back from the day-to-day demands of running the business and take both a granular and a holistic view of the threats to the business, thanks to our series of Risk Forums that we hold each year.



OUR STRATEGY

Our strategic framework

OUR VISION

To be consistently the best performing Distribution Network Operator and Distribution System Operator in the UK.

There are four aspects to our vision:

...to be an employer of choice

...to be a respected and trusted corporate citizen

...to be sustainably cost-efficient

...enabling the Net Zero transition for all

OUR STRATEGIC PRIORITIES

We aim to provide a safe, reliable service that meets our customers' needs at the lowest price and that facilitates the transition to Net Zero.

> See our Operational Performance section on page 16 and 30-39

Keeping employees and the public safe



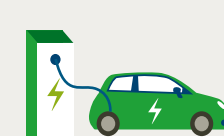
Providing a reliable electricity supply



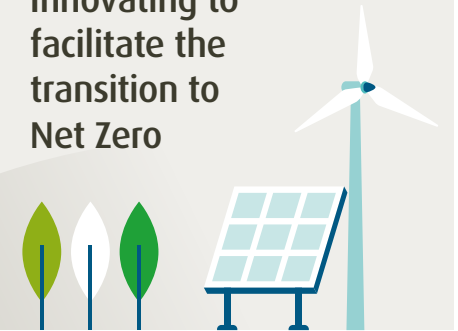
Focus on customer satisfaction



Delivering value for money



Innovating to facilitate the transition to Net Zero



OUR SUSTAINABILITY STRATEGY

We want to make sure that we operate in a way that means we can do so for many years to come.

> See our Responsible Business section on page 18-29

Environment

We aim to do as much good and as little harm to the environment as possible.

> See page 20



Our employees

We are a safe, fair and inclusive employer that people want to work for.

> See page 24



Social responsibility

We play an important role in the life of our communities.

> See page 26



OUR VALUES

We deliver high performance underpinned by our values.



Integrity



Respect



Continuous improvement



Responsibility



Diversity and inclusiveness



Unity

PROGRESS AGAINST OUR STRATEGY

Aligning our strategic priorities

Keeping employees and the public safe



What this means and why this is important

The safety of our employees, contractors and the public is our number one priority.

We want UK Power Networks to provide a working environment where no one suffers injury or illness because of our actions or inactions.

2022/23 achievements

- Our Lost Time Recordable Injury (LTRI)¹ rate in 2022/23 was 0.01 and we have seen a 94% reduction in our LTRI rate since we started as an independent business in 2010.
- In 2022/23 there were four RIDDOR² reportable injuries to members of the public relating to our activities. The safety of the public remains a top priority for us and we continue to improve the ways we work to reduce risk associated with the work that we do.
- In 2022/23 we engaged with over 400,000 people through our website, school visits and other interaction with young people and the public. The overall target was to reach two million members of the public over the eight-year RIIO-ED1³ period. We were 73% over this target.

Looking ahead

- We will minimise injuries to our staff as measured by the Total Recordable Injury Rate (accident rate per 100,000 hours worked), striving for a rate of less than 0.05 by the end of the RIIO-ED2⁴ period.
- We will reduce the number of third-party overhead line and underground cable strikes by at least 20% over RIIO-ED2 (relative to the performance between 2015 and 2020).
- We will increase our commitment to engage with the public around safety issues, focusing on those who are at highest risk of injury from contact with our networks, by engaging with 300,000 people per year during RIIO-ED2 (vs. 250,000 people per year during RIIO-ED1).

Read more

> Read more on page 30

Providing a reliable electricity supply



We maintain electricity cables and lines across London, the South East and East of England and make sure power flows reliably, safely and securely.

Reliable access to electricity is becoming ever-more crucial, as we decarbonise transport and heating systems, for example switching to EVs and heat pumps.

- UK Power Networks has proved to be the most reliable of Britain's DNOs, out-performing the Ofgem targets by 30% for both CIs and CMLs in 2022/23.
- We are the only DNO to have worked alongside the Cabinet Office Emergency Planning College. We align ourselves to the British Standard, BS 65000: Guidance for Organisational resilience. In our latest baseline review conducted in September 2021, we scored the highest outcome of level 5 in the risk management and leadership and culture categories and level 4 out of 5 in the remaining three categories.
- Ranked number one in the UK for smart grid capabilities in the Singapore Power Group's Smart Grid Index.

- We will continue to improve our organisational resilience capabilities by considering the changing risks our business faces. We will aim to achieve a 'Good practice' rating against the BS 65000 standard that will be independently assessed by the Emergency Planning College (EPC), by the end of the RIIO-ED2 period.
- We will reduce 12-hour interruptions in normal weather conditions by 25% on average across RIIO-ED2 in each of our EPN, LPN and SPN regions, compared to the RIIO-ED1 average.
- We will continue to enhance our resilience to sophisticated cyber attacks throughout RIIO-ED2 and comply with the Network and Information Systems Regulations 2018 through the National Cyber Security Centre (NCSC) Cyber Assessment Framework in order to protect our networks, secure our customer data, and keep the public safe.

> Read more on page 32

Focus on customer satisfaction



We continue to improve existing services to meet customers' evolving needs.

We want to ensure that our customers have the best possible service from us. We are always on the lookout for ways to improve what we do and how we do it.

- Ranked 1st in Ofgem's Broad Measure of Customer Satisfaction with a 94% customer satisfaction: our best ever score.
- Ranked 1st in July 2022 and 3rd in January 2023 survey of best customer service providers by the Institute of Customer Service (ICS) across all UK industries.
- Ranked 1st by an expert panel commissioned by the regulator, Ofgem for stakeholder engagement and consumer vulnerability for fourth year in a row.

- We will maintain our position as the number one service provider amongst our peers over the RIIO-ED2 period. We will aim to be the number one DNO Group as measured by customer satisfaction, or to achieve at least a 93% score on average across our networks in each year of RIIO-ED2, whichever is higher.
- We will resolve customer complaints quickly and to customers' satisfaction, improving against our RIIO-ED1 baseline performance in each year of RIIO-ED2. We will target 89% first day resolution and 99% 31-day resolution.
- We will improve our services through RIIO-ED2 based on a better understanding of our customers in vulnerable circumstances and from our low carbon and small business customers. We will measure and report on these customer segments and aim to be the number one DNO Group (as measured by customer satisfaction) in them, or to achieve at least a 93% score on average across our networks in each year of RIIO-ED2.

> Read more on page 34

Delivering value for money



We deliver the lowest possible bills by driving efficiency and innovation in everything we do.

We provide an essential service, so we take every opportunity to maximise value for our customers, and keep our part of the bill low.

- Lowest-cost DNO across the eight years of the RIIO-ED1 period (2015/16 – 2022/23). This means our customers paid 8% less than the industry average.
- Over the eight years of RIIO-ED1, we have saved our customers over £430 million (2022/23 prices), whereas the other five DNO groups combined have saved their customers £28 million.
- Achieved the Chartered Institute of Procurement & Supply (CIPS) accreditation – only DNO and one of only 16 companies internationally that has been awarded Platinum.

- We will establish the UK Power Networks Foundation fund to support those most in need in the communities we serve. We will contribute up to £4m (approximately 1% of profit after tax) to the fund each year during RIIO-ED2.
- We will keep our costs down by taking a 'flexibility and energy efficiency first' approach over RIIO-ED2 and will market test all network needs before considering reinforcement. These needs will be procured through a range of long-term and short-term markets and products, which are inclusive by design and ensure no customer is left behind in the energy transition.
- Our DSO function will deliver up to a £410m reduction in load-related expenditure during RIIO-ED2 through increased competition and use of low voltage (LV) flexibility, including at the domestic level.

> Read more on page 36

Innovating to facilitate the transition to Net Zero



Innovation is central to our vision, as we strive to be the most innovative of all the DNOs.

Our openness to new and better ways of working is the driving force behind our success. That is why we are continuing to lead the industry in preparing the electricity infrastructure and network for transition to Net Zero.

- In 2022/23, UK Power Networks has awarded 1.5 GW of flexible contracts to distributed energy resources and aggregators to increase demand or turn down supply during periods of excess power. Over 1000MW was made available through two flexibility tenders attracting high levels of competition to drive down costs and has deferred £121.4m of reinforcement spend over the RIIO-ED2 period.
- We have deployed 58 innovative solutions into our everyday business as usual operations over the RIIO-ED1 period. This has brought about £95m of customer savings in 2022/23 and £425m of customer savings over the eight years of the RIIO-ED1 period – the highest of all DNOs.

- We will ring-fence £25m of our total allowance and allocate a further £25m of our own money for investment over RIIO-ED2 to improve network performance for our customers through innovation projects. We will publish key business challenges quarterly in a structured process as well as remaining open to innovation ideas at any time.
- We will allocate £25m Network Innovation Allowance (NIA) funding over the RIIO-ED2 period, of which £20m will go to third parties, targeted to ideas that deliver 4x wider societal return on investment.
- Over RIIO-ED2 we will deliver 1 GW of distributed energy resources (DER) capacity at a cost of no more than £8m, using smart interventions and new innovations, reporting progress in our annual business plan.

> Read more on page 38

¹ Please note that for reporting purposes we have followed the established industry practice of not including fatal accidents in the lost time injuries (LTI) category.

This in no way diminishes the impact of the death of our valued colleague this year.

² Reporting of Injuries, Diseases and Dangerous Occurrences Regulations.

³ RIIO-ED1 period covers the eight-year price control period from 1 April 2015 until 31 March 2023.

⁴ RIIO-ED2 covers the five-year price control period from 1st April 2023 till 31st March 2028.

Sustainability extends to all parts of our business

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We are committed to conducting our business responsibly. Our purpose is underpinned by a set of values that define the way we do business. Our dedication to being principled means we do the right thing, creating a culture where responsible decision-making is at the heart of everything we do.”

Suleman Alli
Director of Finance, Regulation, Strategy and Technology



OUR FOCUS AREAS

Our approach to responsible business

It is UK Power Networks' vision to be consistently the best performing Distribution Network Operator and Distribution System Operator in the UK. A key element of this vision is our drive to deliver the services that our customers want at the lowest cost. Achieving this in a sustainable way has always been at the core of our strategy. We believe that a company can only be high performing, over a sustained period of time, if it goes about all of its activities in a balanced way.

We are committed to conducting our business responsibly. Our purpose is underpinned by a set of values that define the way we do business. Our dedication to being principled means we do the right thing, creating a culture where responsible decision-making is at the heart of everything we do.

Sustainability is not simply about our own carbon emissions; this is of course an important factor but, for us, sustainability extends across all of our activities: how we support and develop our employees, the innovations we develop to support Net Zero, and how through collaboration we support the communities who depend on our services. The following sections set out how we are performing against all of these areas.

We recognise that we play a critical role in facilitating the transition of the UK to a Net Zero society by 2050. Our key focus is to ensure that the electricity network has sufficient capacity

to support the decarbonisation of both transport and heat and also to connect renewable generation to meet that demand.

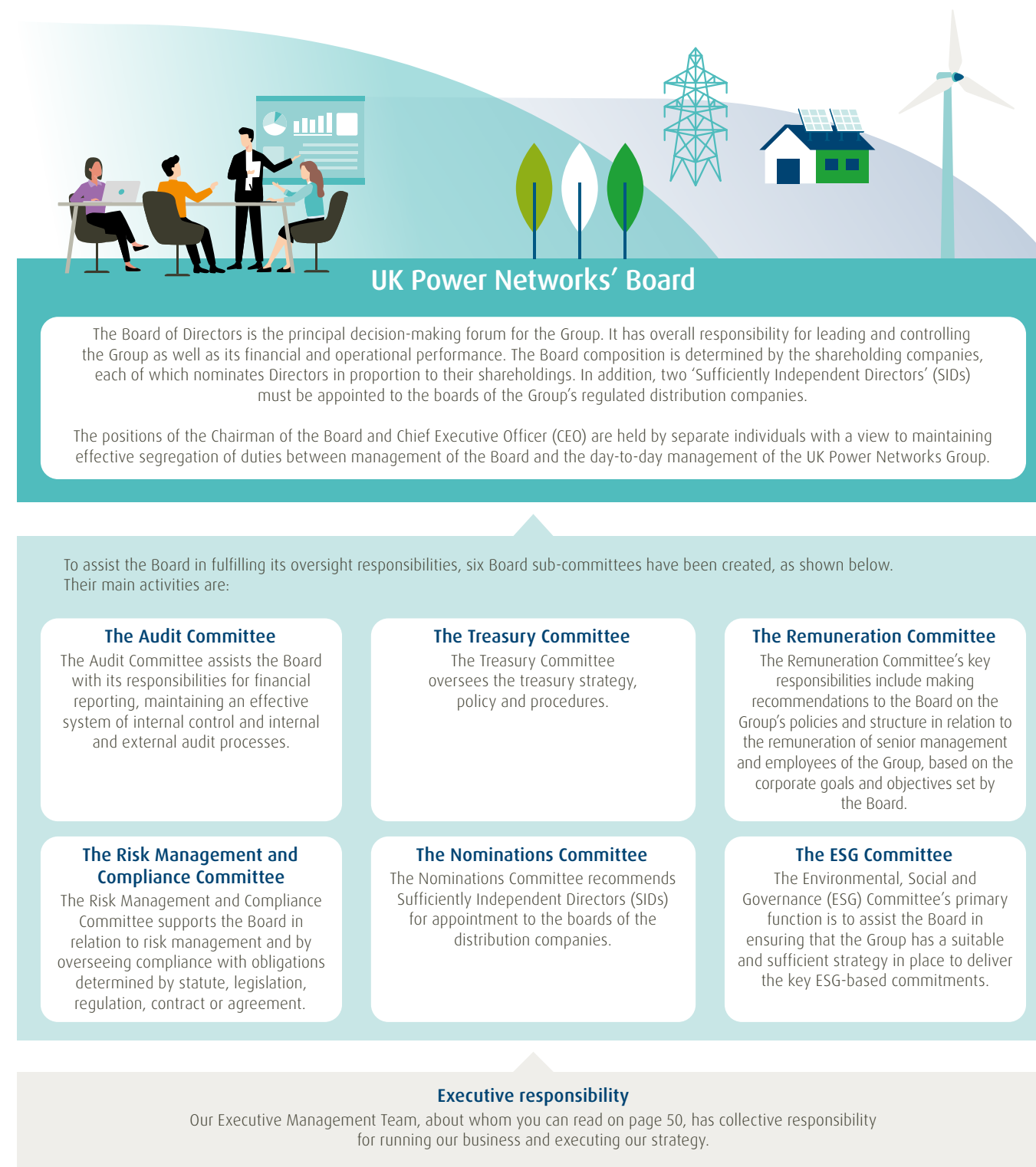
We always bear in mind that doing this in a sustainable way is vital to keeping customer bills down. That is why we are leading the way in our sector by establishing the first independent Distribution System Operator (DSO) with its own supervisory Board. This DSO will review and challenge our investment proposals to ensure that they deliver what our customers need at the lowest cost. Key to achieving this is our focus on innovative approaches to maximising the utilisation of the existing network capacity, including paying our customers to shift their energy usage, often referred to as network flexibility. We believe this flexibility will replace £410m of expenditure on new and replacement assets over the next five years; this in turn will reduce the raw materials we require and minimise the amount of streetworks we need to undertake.

We also understand that the current economic situation is presenting our customers with significant challenges and we need to step up our efforts even more to support them. Working with the local authorities in our region, we matched the cost-of-living funding they were providing to support their residents. Going forward we will be establishing a social fund, paid for by UK Power Networks, which will provide £4m per year to support our local communities. We have also set up a dedicated team within our DSO to provide free support to our local authorities, county councils and other planning authorities as they develop and seek to implement their own Net Zero plans.

A sustainable business approach has, and always will be, core to our strategy.



Our governance framework



A RESPONSIBLE BUSINESS

Delivering our Net Zero challenge



We have a pivotal role to play in the UK's transition towards a Net Zero economy, ensuring that our network is able to support the decarbonising of power, heat, and transport. We must also manage down our own operational carbon emissions, address resource use and biodiversity enhancements, and minimise pollution."

Mark Adolphus
Director of Health, Safety, Sustainability and Connections



Who is responsible

Mark Adolphus
Director of Health, Safety, Sustainability and Connections

Targets

- Reduce our full carbon footprint by 28% by the end of RIIO-ED2 (from a 2018/19 baseline), aiming to exceed our carbon reduction target approved by the Science Based Targets initiative (SBTi) at well-below 2°C.
- Reduce our supply chain's carbon emissions (Scope 3) by 25% by the end of RIIO-ED2, compared to a 2018/19 baseline.
- Recycle 80% of office, depot and network waste and re-use 99.5% of streetworks material by the end of the RIIO-ED2 period, with no recoverable waste to landfill by 2025.
- Reduce NOx emissions by 33% over the RIIO-ED2 period, improving air quality for our customers.

Commitment to a circular economy

A clear opportunity for all forward-thinking companies is to move their business and supply chain activities from an extractive linear process to a more circular regenerative one. The traditional model of extraction of raw materials, manufacture and supply, use of product and end-of-life disposal has a significant impact on carbon emissions, resource use, natural habitats and human welfare. Instead, a circular regenerative model seeks to design out these negative impacts on the environment and human welfare, recover valuable resources, keeping them in the value chain, regenerate nature and reduce financial costs.

Our supply chain is large and complex but we do have influence with our suppliers and have set common goals to reduce waste, pollution and impacts on biodiversity, and drive down carbon emissions. In partnership with our suppliers, we aim to identify and share the best practice that already exists within our supply chain as well as pinpoint opportunities to target the most impactful elements of the supply chain. We have already engaged with the Ellen MacArthur Foundation using their Circulytics tool to measure our circular economy performance, which is helping us to identify the areas we need to target for improvement.

First DNO

UK Power Networks became the first UK DNO with an officially ratified Science Based Target committing to reduce all its Scope 1, 2 and 3 emissions by 25% by 2028 from a 2018/19 baseline. UK Power Networks has also set a Net Zero target by 2028 on its controllable Scope 1 and 2 emissions, which include SF6 emissions.



The following are examples of circular economy processes that are established at UK Power Networks:

- Recovering for re-use 99.9% of streetworks spoil
- Using 60% by volume low carbon concrete types
- Using 280 km of electricity cable ducts (pipes) made using recycled materials
- Working with reprocessing facilities to recycle metals and other materials from distribution equipment such as transformers and switchgear
- Collaborating with our Personal Protective Equipment supplier to replace plastic packaging with recycled alternatives, eliminating plastic waste for over 7,300 items per year
- Replacing hard plastic casing around power tools with cardboard packaging
- Introducing 2,000 reusable water bottles, resulting in a 33% reduction of single use plastic bottles
- Using second-hand furniture where possible at a new site in Borehamwood and choosing energy and water saving equipment in office refits.

In the regulatory period that has recently concluded (known as RIIO-ED1), we set ourselves some key targets focused on carbon reduction, waste, recycling and noise. We achieved many of these in the first few years of RIIO-ED1, so rather than rest on our laurels we developed additional targets, adding metrics on biodiversity, energy and water. At the end of RIIO-ED1 these were all met or exceeded. This work provided solid foundations for target setting and the development of our Environmental Action Plan for RIIO-ED2.

This early action enabled us to achieve verification of our carbon targets with the SBTi in 2021 well ahead of Ofgem's requirements for RIIO-ED2. We became the first UK DNO with an officially verified Science Based Target that committed us to reducing all our carbon emissions (including supply chain emissions) by 25% by 2028 from a 2018/19 baseline. In addition, we also committed to the SBTi's Business Ambition for 1.5°C which commits us to upgrading our Science Based Targets early on and adopting the Net-Zero Standard¹ which we aim to submit in 2023/24.

¹ The SBTi Net-Zero Standard provides companies with a clear blueprint on how to bring their Net Zero plans in line with the science. It requires companies to have short-term carbon reduction targets and a long-term Net Zero standard, with the ultimate aim of achieving a 90% reduction in emissions before 2050. The remaining 10% can be neutralised through high quality carbon offsets that permanently remove and store these residual emissions.

What we've achieved

The ever-more tangible effects of climate change resulting from carbon emissions are driving our relentless ambition to support Net Zero, along with other measures to protect the planet. Below is a selection of our environmental achievements in 2022/23.

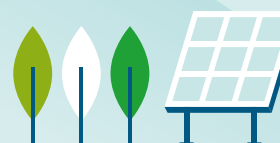


36%

reduction in our CO₂ emissions since our baseline year 2014/15

1st DNO

to have all Scope 1, 2 and 3 emission targets verified by SBTi

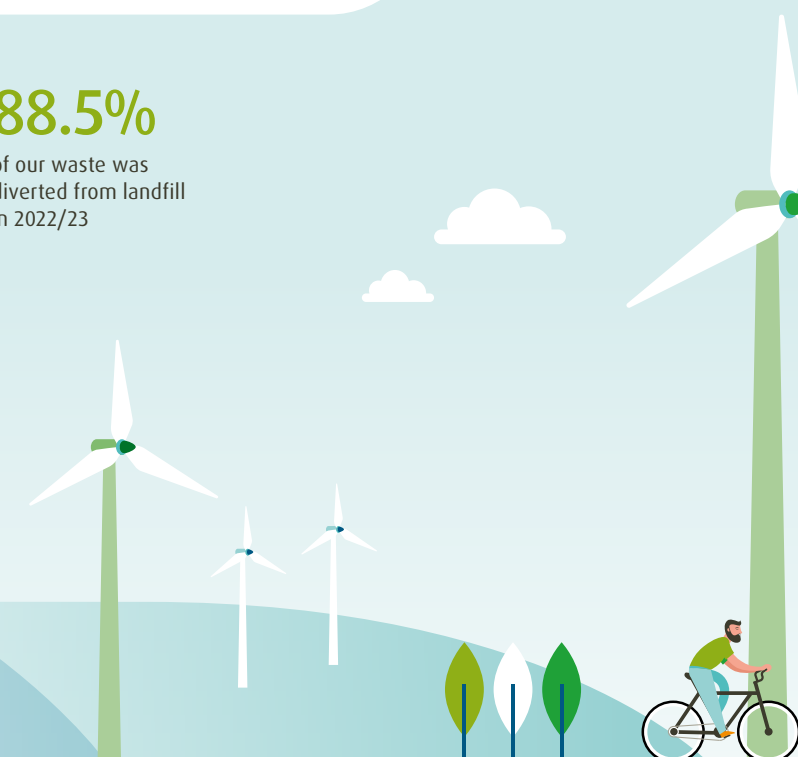


99.9%

of our streetworks spoil was recycled in 2022/23

88.5%

of our waste was diverted from landfill in 2022/23



A RESPONSIBLE BUSINESS

Delivering our Net Zero challenge continued

Noise mitigation and prevention

In last year's report we outlined the work we had undertaken to map land that could be used for housing development around our substations. We built a model and added noise contours around the substations to identify where low frequency noise could be a problem in the future. We have very few noise complaints, but where development may take place close to our sites there is a possibility that the new dwellings could be affected. This data is now on our Open Data Portal, together with a wealth of other information (see pages 38 and 39) and provides a tool for local authority planners and Environmental Health Officers to ensure that the 'agent of change', in other words the developer, implements suitable mitigation as part of their planning consent.

We engaged extensively with the local authorities across our footprint and the Institute of Acoustics to raise the profile of this platform and will continue to do so. We are also now looking to build a similar tool for secondary substations that local authorities can use for smaller developments.

Looking for ways to replace highly potent greenhouse gas SF6

Sulphur hexafluoride (SF6) is a colourless, odourless, non-toxic, non-flammable gas that is around five times denser than air. It is an excellent electrical insulator, great at extinguishing arcs and preventing short circuits in medium and high voltage equipment. It is extensively used in switchgear and circuit breakers in electrical installations and can be found in power stations, wind turbines and substations to name a few.

It is, however, an extremely potent greenhouse gas, with 1 kg of SF6 equivalent to 23,500 kg of carbon and an atmospheric lifetime of hundreds, possibly thousands of years. It is, for our operations, a very small part of our overall Business Carbon Footprint, accounting for less than 4% of this on average. The sources of these emissions are from very small leaks due to equipment failure, and this equates to less than 0.1% of our SF6 operational bank. Read the case study left to see how we are working to reduce this.

Improving temporary generators

In a similar vein, we are trialling hybrid generators and alternative low carbon fuels to replace diesel-fuelled generators that are both noisy and carbon intense. They are, of course, vital to maintaining continuity of supply during planned works and emergencies; they make up around a fifth of our Business Carbon Footprint. See the innovation section on page 38 for more details.

Update on biodiversity

We reported last year that a pond next to one of our substations in Suffolk was judged by the Suffolk Wildlife Trust to offer a suitable habitat for great crested newts. This judgement was ratified in 2022/23 when eDNA testing confirmed that DNA from great crested newts present in the pond. This means we can be confident that the work we have carried out has provided suitable habitat for the newts and will provide breeding opportunities as it matures.

Other work on biodiversity has continued with ongoing identification of sites for future biodiversity treatments, and volunteer days at existing sites. In the past year work parties across all three network areas have completed tasks including:

- Planting hedgerows
- Woodland improvements
- Pond enhancement
- Building terrestrial habitat for newts and invertebrates
- Removing invasive species
- Installing bat and bird boxes
- Establishing wildflower areas to support pollinators.

Clean air switch gear in Lewes, East Sussex

In 2022 we installed our first clean air Gas Insulated Switch gear (GIS) at our site in Lewes, East Sussex. This project is part of our ambition to reduce use of SF6 for new switchgear across all voltage ranges where alternatives are available on the market and supports UK targets for Net Zero carbon emissions, while maintaining reliable power supplies.

“We are delighted to have been commissioned to deliver this exciting new project for UK Power Networks and to have the opportunity to utilise our SF6-free switchgear technology.”

Mark Simblett
Managing Director transmission products at Siemens Energy



Our approach to climate change

UK Power Networks continues to play an essential role in facilitating Net Zero for our customers and the UK economy, as we all look to decarbonise our lifestyles, transport, commerce and industry. We will ensure that the electricity network can accommodate low carbon generation, EV infrastructure charging, energy storage, heat pumps and so on. We must also prepare the network to be climate resilient through our climate adaptation plan and ensure that this plan remains current and viable so that the network remains robust. At the same time we are committed to reducing our own daily operational carbon emissions in line with our Science Based Targets, as well as addressing our wider environmental impacts.



	Description
Governance	<p>The governance around climate-related risks and opportunities</p> <p>As a regulated high-performing business, our operations and activities are open to rigorous scrutiny from both our regulator Ofgem and wider stakeholders. In addition, our environmental management system (EMS) certified to ISO 14001 requires us to undergo independent third-party audits from a UKAS certified body. Our Environment, Social and Governance (ESG) Board sub-committee, formed in 2021, has continued to meet three times a year to review our progress against key ESG metrics. The issuance of green bonds also continues to bring external scrutiny to our operations and our actions in reducing our carbon emissions and environmental impacts. We will also be looking to formalise our external monitoring and verification of our carbon reporting in line with our Science Based Target reporting. All these actions and oversight of our activity will continue to drive the ESG performance of this company, holding us to account for any underperformance.</p>
Strategy	<p>The planning and organisation needed to achieve our overall goals under conditions of uncertainty</p> <p>Our business plan for RII0-ED2 has clear commitments to ensure we reduce our operational carbon footprint, support vulnerable customers and ensure that our network is not an impediment to the transition to Net Zero. Our objective is to achieve this at the lowest cost to the customer and we have adopted a flexible plan to avoid saddling our customers with large upfront and potentially unnecessary costs. We are actively targeting flexibility through our DSO, building our market intelligence, upskilling our workforce, investing strategically and engaging widely with key stakeholders, including Ofgem, local authorities, domestic and business customers and non-governmental organisations. We will regularly review and track our strategy and our approach across our business functions to address shortcomings and seize opportunities to go further where it makes strategic sense to do so.</p>
Risk management	<p>The processes used to identify, assess and manage climate-related risks</p> <p>UK Power Networks has a mature and well-embedded risk management process that continually reviews current risks against our existing operations, business plans, stakeholder expectations and changing regulatory environment. The threat of climate change is an area of growing concern to our society and economy. As an operator of the UK's largest electricity network, it is imperative that we have a robust climate adaptation plan in place. This aspect only grows in importance as we consider the changes that progressing to a Net Zero economy present, such as domestic heating switching to heat pumps or transport to EVs. Reliance on electricity is therefore growing. We have, under our current plan, made excellent progress protecting substations at risk of flooding in the future and updated our model to identify additional sites to address in RII0-ED2. In addition, we have made improvements to our vegetation management, enhanced our capability to identify high impact rainfall events and significantly stepped up our storm response and enhanced our call handling capability.</p>
Metrics and targets	<p>The metrics and targets used to assess and manage relevant climate-related risks and opportunities</p> <p>Over the course of RII0-ED1, UK Power Networks has taken action to improve climate resilience. We have identified and protected over 119 substations at risk of various types of flooding, reducing the risk of flooding from an average of 70 per cent to 13 per cent for those customers at risk. Other additional measures include:</p> <ul style="list-style-type: none"> • Improving vegetation management, using Light Detection and Ranging (LiDAR) assessments to target tree cutting activities more accurately around overhead lines; • Improved modelling and analytical tools to identify high impact rainfall accumulation five days in advance that may affect infrastructure; and • Improving storm response of the wider business to ensure call handling centres are not overwhelmed, storm roles of staff are embedded, and vulnerable customers supported.

Attracting and retaining the best people

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We are building a culture of inclusivity and opportunity where our people can thrive. Our services are embedded in the communities we serve and we strive to play a positive role in them: not only by providing the essential services of a DNO, but also by recognising and developing the potential we see in those communities.”

Andrew Pace
Director of HR, Legal, Risk and Assurance and Company Secretary



Who is responsible

Andrew Pace
Director of HR, Legal and Company Secretary

Targets

- Benchmark nationally and globally as a leader in the field and target retention of our Platinum Investors in People accreditation and Best Companies listing throughout RIIO-ED2.
- Retain our National Equality Standard accreditation and status as a Top 50 Inclusive Employer throughout RIIO-ED2.
- Improve our safety performance and reduce the Total Recordable Injury Rate to <0.05 by the end of the RIIO-ED2.
- Establish a Digital Skills Academy to provide DSO and digital future skills and target the achievement of an 'Outstanding' Ofsted rating for our training programmes.

The service we provide, the remarkable innovations we bring to the market, indeed everything UK Power Networks does, depends on our employees doing their best every time they come to work. We want the best people to work for us and in return we look after them, value them, and help them follow the career they want. Diversity and inclusion (D&I) is at the heart of our approach to developing our workforce. We recognise the importance of drawing on the widest pool of talent possible in order to attract and recruit the best people to work with us. We understand the value of a diverse workforce that reflects the communities we serve.

Expanding horizons

In 2021 we joined the Purpose Coalition, led by former MP Rt Hon Justine Greening, to collaborate and share best practice with some of the UK's leading companies on social impact. Much of our area of operations, particularly in Eastern Power Networks (EPN), offers little variety in employment opportunities for those in rural communities. Agriculture and the hospitality industry provide a high proportion of the job prospects in these areas. We are determined to broaden the employment horizons of the communities we serve.

UK Power Networks achieved 6th position on the 2023 Inclusive Top 50 UK Employers list and is one of only 2% of companies worldwide to achieve Platinum Investor in People status. We hosted the gas and electricity distribution industry's first cross-industry event for International Women in Engineering Day 2022 and welcomed 65 female STEM students to a dedicated International Women's Day careers event in March 2023.

The power of apprenticeships

UK Power Networks delivers over 100 apprenticeships at any one time to enable access to traditional and emerging careers. As an apprenticeship employer we offer three levels of apprenticeships.

As part of our commitment to the Purpose Coalition, we have introduced a number of work experience programmes and internships aimed at offering access and opportunity to under-represented groups including looked-after children in care. For example, UK Power Networks welcomed nine Year 12 students over the summer holidays in 2022. Seventy five percent of the participants were girls, 75% were from ethnic minorities and 87% from low-income families. The students' task was to complete a research project exploring and evaluating our response to the unprecedented series of storms that had hit the previous February. Over two weeks, the youngsters met people from key parts of the business to learn about how they respond to a major weather event. The students had the opportunity to ask lots of questions, review the available data and take part in workshops and site visits. They each produced a report summarising what they had discovered and gave their assessment of our performance. This helped them develop research skills and confidence. In return, we learned a lot about the power of TikTok and the role of social media in teenagers' lives.

Following the success of our first year with Urban Synergy in 2021, we doubled our intake of paid interns in 2022. Urban Synergy identifies 16 to 18-year-olds from under-represented sectors of society to work for four weeks with UK Power Networks in departments such as asset management, employee engagement, communications and procurement.

Designed primarily as a work experience programme, Urban Synergy has nevertheless already led to one participant joining us on a craft apprenticeship.

In 2022/23 we launched a new Digital Academy that provides up to 400 spaces over five years for employees, including new recruits, on a range of new apprenticeship courses focused on digital and technology skills. We are looking to our future as a DSO, so new roles that the Digital Academy will support include digital strategists, data analysts, cyber security and software engineering.

Supported studies

We are committed to supporting our employees throughout their careers with us. This benefits employees and UK Power Networks as it means we have a highly skilled and motivated workforce. In 2022/23 we invested £700,000 in supported studies for our employees, to equip them for the development of their careers.

The UK Power Networks Leadership Academy launched two levels of management training apprenticeships in 2021. Since then, 170 managers have enrolled to train as supervisors or managers. Of those who passed the management course, 81% gained a distinction. So far in 2023 over 40 of our managers graduated from the programme with a diploma in Leadership and Management.

Taking care of our employees

We also take care of our employees as individuals by recognising some of the hurdles they face in their life and providing tools and support to help them navigate those challenges. For example, in recognition of the fact that one in ten women in the country leaves her job because of menopause symptoms, we launched new guidance to help managers make helpful workplace adjustments for women at this point of their lives. To support the retention and development of women in the sector we have increased our maternity leave policy to six months full pay, alleviating some of the financial concerns new parents may experience.

Similarly, as part of Men's Mental Health Awareness Month in November, we have focused on helping field staff with wide ranging mental health support. We recognise that operational teams can find it more difficult than office-based staff to access support services. Field staff who spend most of their time on the road, fixing underground or overhead cables, are more likely to find themselves working alone, such as being first on site at an electrical fault, meaning they can risk feeling isolated. To support this group, we have begun a series of well-being events across the East of England covering psychological safety, neurodiversity, mental health (by ex-Armed Services speakers) and occupational health advice.

Taking a view from the outside

We value independent evidence and opinions, so the awards, accreditations and endorsements we receive are important to us.



Awards



The UK's Best Big Companies to Work For

UK Power Networks has achieved 2nd place in the Best Big Companies To Work For list in Q1 2023 and we remain the only electricity DNO to feature in this list.

Large Contact Centre of the Year

UK Power Networks' top class customer service team from Ipswich won the Large Contact Centre of the Year category at the European Contact Centre and Customer Service Awards (ECCCSA), the latest of which has seen them voted the best in Europe.



UK Power Networks took home 'Capital project of the year' at the Utility Week Awards 2022

The Leicester Square upgrade project saw three 100-tonne transformers replaced underneath the heart of London's theatreland, and was successfully completed a year early, below budget and with zero damage and harm. The upgrade gives London's West End increased resilience and energy capacity for decades to come.

UK Power Networks bags 'Most Admired' award

UK Power Networks has become Britain's Most Admired Company for the Energy Distribution & Supply sector for 2022. The award, part of the Britain's Most Admired Companies survey conducted by Echo Research in partnership with Coventry University, rated 259 UK companies after interviewing 292 C-suite peers and analysts across 28 sectors.



Accreditations



UK Power Networks has retained its Platinum status – the highest level of accreditation held among just 5% of IIP certified companies globally.



UK Power Networks ranked best customer service provider of any utility and 3rd across all organisations in the UK.



UK Power Networks demonstrated exceptional procurement delivery, to confirm its position within an elite worldwide group who have gained the Chartered Institute of Procurement & Supply (CIPS) Corporate Certification advanced 'Platinum' award.



Highest standard in the UK of best practice on equality, diversity and inclusion. First DNO to be awarded the National Equality Standard.



UK Power Networks rises to 6th place in the Inclusive Top 50 UK Employers list and is the only DNO to feature on the list.

Working for a fairer society

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The cost-of-living crisis hit our customers hard in 2022/23 and energy costs were a major part of their financial pain. As a key player in the energy market, we redoubled our efforts to provide support and relief where we can, in particular for customers in vulnerable circumstances and for the increasing number of those in fuel poverty.”

Ian Cameron
Director of Customer Services and Innovation



Who is responsible

Ian Cameron
Director of Customer Services and Innovation

Targets

- Expand the scope and reach of our Priority Services Register (PSR), delivering an overall 30% increase in registrations in the RII0-ED2 period and continue to improve the satisfaction of our PSR customers.
- Provide targeted support to a total of 500,000 fuel-poor customers over RII0-ED2, investing £18m to support over 200,000 directly and 300,000 through partnership programmes.
- Provide information and help to 500,000 vulnerable customers over RII0-ED2 to ensure no one is left behind in the changing energy system, at no cost to customers.
- Reduce the number of third-party overhead line and underground cable strikes by at least 20% for each year over RII0-ED2 and increase our commitment to engage with the public around safety.

Fuel poverty is where a household needs to spend 10% or more of its income in order to heat their home satisfactorily. National Energy Action estimates that around 7.5 million homes in the UK are entering fuel poverty and are unable to afford to heat their homes to the temperature needed to keep warm and healthy. In light of this, as a socially responsible business at the heart of the energy industry, UK Power Networks acted fast and decisively to do what we could to reduce the impact on our customers. In 2022/23 we committed to supporting twice as many customers who need our help than we have ever helped before. Focusing on areas that deliver maximum impact, we established a Cost-of-Living Fund that provided £500,000 extra funding to scale up the support we give to customers in need.

Our key priority is to relieve the enormous pressure of the cost-of-living crisis on those who are feeling it most. At the same time, we also take a longer-term view. A Net Zero carbon economy brings benefits all round; it brings bills down and makes the planet healthier. We do all we can to make sure that the transition to Net Zero is one that everyone can share in, regardless of their circumstances.

In 2022/23 we doubled the reach of our fuel poverty support programme compared with the previous year. We found new ways to help our customers, including those who were not previously receiving support, and we did more of the tried and tested things we were already doing for more people.

Match funding with local authorities

Thanks to our close working relationships with fuel poverty delivery partners, we heard that many were struggling to keep pace with surging demand and that local authorities were unable to fund extra support. As a result, we worked quickly to establish a programme of match funding for the activities that local authorities set up to support residents.

For example, we worked with local authorities, including across network licence borders with SGN and Scottish and Southern Electricity Networks (SSEN) to provide 129 ‘warm hubs’ in venues such as libraries and community centres in Surrey and Sussex. Residents could come during the day to keep warm, as well as meeting people and joining in with activities if they wished. UK Power Networks contributed to the funding of these centres, covering operational costs, and supplying energy advisors and training new energy advisors to provide energy-saving advice and warmth packs to visitors.

Extra help for people with disabilities

Research by one of our charity partners, Scope, found that even before the cost-of-living crisis, people with a disability faced extra costs of £583 every month on average. This group of people is being hit disproportionately hard by the fuel crisis. In the course of our discussions with Scope, we learned that there was a gap in short-term support available to customers with credit meters. As a result, we teamed up with Scope to provide £80 fuel vouchers for customers on credit meters who have a disability and those with medically dependent conditions. Following a successful trial involving 100 such customers, we invested a further £100,000 to provide vouchers to go towards fuel bills along with advice on a range of subjects such as benefits, energy trust fund

applications, water debt relief and energy and water efficiency. Getting help to customers with credit meters before they have started to accumulate debts on their bills could reduce the risk of their being switched to a prepayment meter with all the challenges that can entail. The support was made available to over a thousand customers who called Scope’s Disability Energy Support line.

Building on existing support

As well as a number of new, socially responsible initiatives, we also expanded and extended activities that we have carried out for some years and that we know work. For example, working with our partners, we have increased the number of home visits to customers in the London Borough of Lewisham. These visits, carried out by our third-party partners, improve our understanding of the conditions that customers can face and provide an opportunity to service and repair under-performing boilers, as well as advising customers who welcome it on energy efficiency and money saving tips in their own homes.

Leaving no one behind in the Net Zero transition

Alongside the recent fuel and cost of living crises, we remain focused on the climate emergency facing the world. UK Power Networks wants to help make sure that the benefits of reducing carbon emissions – which are financial as well as environmental – are available to everyone, not just to those who can afford EVs and heat pumps.

In 2022/23 we launched our Home Action Plan to support customers to reduce the carbon emissions of their homes, helping them understand what actions they can take and where to go for further help. The action plan sets out a range of measures customers can take, ranking them in terms of effectiveness and includes actions that are free or very low cost as well as those requiring more initial outlay.

We’re also working to make sure all our customers see the benefits of low carbon technologies including making sure everyone can access and take part in flexibility. Flexibility products currently offered are not accessible to everyone, particularly those customers with whom, for a range of reasons, we are traditionally less successful in engaging. We’ve been analysing data to understand what social indicators overlap with the most constrained areas on our network, as well as what barriers customers face in these areas. This indicates where flexibility could offer the most value to both our customers and the network. Building on this information we engaged with customers and aggregators to shape a social flexibility product that works for them. This addresses the identified barriers to participation, ensuring customers are not left behind and can benefit from flexibility services.

Cookery classes for a cost-of-living crisis

With 45% of lower-income households cutting down on or skipping meals according to the Joseph Rowntree Foundation, UK Power Networks partnered with UKHarvest and gas distribution network Cadent to provide Food and Fuel cookery classes on preparing healthy low-cost meals, food budgeting and energy-efficient cooking. We visited 14 schools in areas of high fuel poverty and where free school meal entitlement is relatively high to provide lessons. Sixty-five schools registered for an online cook-along event, 25 of which were provided with free ingredients. We have also provided 600 energy-efficient slow cookers and air fryers to schools.

“

Every day families are being forced to choose between paying for heating or food. Thanks to the support of UK Power Networks and Cadent, we’ve been able to put tools in place to ease some of the pressures faced by families, helping them reduce the cost of cooking and eating healthy meals. Running classes with students and encouraging them to take their new skills home to involve their parents or carers, we hope to instil longer-term change and continue to support communities across our networks.”

Sian Georgeou
Educational Facilitator at UKHarvest



OPERATIONAL PERFORMANCE

Safety in sharp focus

We live and breathe safety at UK Power Networks, so in a year in which we encountered two serious accidents, one of which proved fatal, this is a time of sombre reflection and great sadness. First and foremost, our thoughts turn once again to our employees' friends, family and colleagues.

On this page you will see how we have performed against the following Sustainable Development Goals:



The accidents in question are both under investigation by the Health & Safety Executive (HSE) which are currently ongoing. We have carried out our own thorough investigations on both incidents and have taken a number of actions to prevent a recurrence. We are focusing our minds and redoubling our efforts to make sure that safety remains front and centre of everyone's mind. As part of an industry where the risks are well known, we spend time and energy on cultivating a culture that places safety above all else. In spite of these accidents, UK Power Networks remains the safest DNO in Great Britain, and was judged the safest in terms of the industry's key measure of Lost Time injuries in eight of the last ten years.

Building on our Stay Safe campaign

We started our award-winning employee-focused safety campaign, Stay Safe, in 2011. It has evolved over the years, with COVID-19 bringing a new maturity to our approach to employee safety. In 2022/23 we refreshed the programme, building on what we have learnt over more than a decade. Our focus in this year has been on applying the theory in practice. Through a combination of media and methods, we have looked at examples of actual situations and how the theory and philosophy of our approach to safety plays out in reality. For example, we take a straightforward, every day scenario and break it down into stages, identifying the decision points that can eventually align to result in an accident that could have been avoided. We look at what could have been done differently at each stage which would have resulted in a better, safer outcome. This is the next step towards instilling responsibility for safety at all levels of the workforce. A workforce that can consciously analyse and break down their decisions into 'what if' thinking, will develop an organic safety culture that learns from pre-evaluating choices rather than from outcomes of investigations.

A fresh approach to safety fundamentals

Early in 2023 we launched our fresh approach to safety, which is expressed in three clear statements: every employee has a role to play as a safety leader; we all have a personal responsibility to work, act and think with safety in mind; and we have a culture that takes pride in knowing and following the rules.

These fundamentals, and the key messages arising from them, appear on posters, fliers and elsewhere throughout the business in 2023, providing openings for conversation as well as points of reference for all employees.

Public safety

As well as keeping our employees and contractors safe, we are committed to ensuring the safety of all members of the public, whether they are at work, at home or wherever they may come into close proximity with our equipment. Certain industries are at particular risk of electricity-related incidents. UK Power Networks' public safety campaign, using incident data, focuses on these higher risk industries, helping people working in them to recognise the potential dangers and how to minimise them. We provide more than 31,000 physical safety resources and regularly target advice via a multi-channel communication programme to those working in industries such as construction, agriculture and haulage.

Focus on the building trade

We calculated that nearly a quarter (23%) of all accidents on our networks in 2021 involved builders, so in 2022 we launched a new education display tool designed to help reduce accidents among builders working with electrical cables. Called **Dig Safe**, it is a learning tool that simulates a potentially dangerous cable strike. It is used at external events to educate third parties on safe working practices and to prompt conversations about safe working around electrical cables and, in particular, the importance of careful planning.



The simulation tool uses a shovel that has been involved in a real cable strike and has the scorch marks to prove it. Further engagement with the building sector, which was supported by the Federation of Master Builders, included communications issued to the sector focusing on dangerous sites and a rise in incidents.

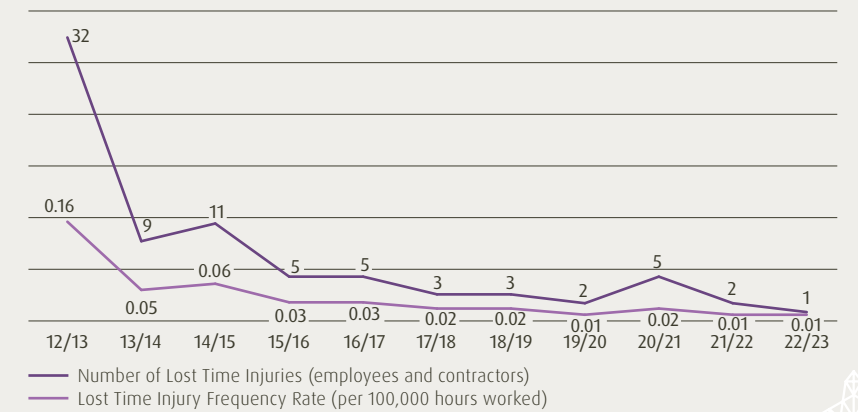
Future farmers

Agriculture is another industry which has a relatively high level of electricity-related accidents with a risk potential for serious injury or fatality. UK Power Networks has built strong relationships with farmers, growers and other related industries, to ensure that everyone understands the particular hazards and how to access safety guidance and advice. In June 2022, prior to the harvest season, the public safety team supported the NFU by delivering overhead power line safety workshops to their members at six events in the East of England, and issued safety cab stickers to all members in our distribution area as a continuous reminder to consider this safety risk. We proactively engage with agricultural colleges and students to deliver power line awareness and behavioural safety courses, educating students about the dangers of high voltage electricity on farms and similar locations.

Keeping the public safe

UK Power Networks is wholeheartedly committed to raising awareness among the general public about how to minimise the dangers of electricity in everyday life. The public safety team works collaboratively with associated organisations hosting events for young people such as crucial crews and school visits. For example, our safety advisers visited St Peter's primary school in Brentwood, Essex, to talk to pupils about the importance of the electricity network and why it matters to be aware of the dangers of high voltage electricity. The advisers talked about why members of the public, especially children, should never enter a substation to retrieve an item, such as a football kicked over a fence. They also pointed out that anyone flying a kite or carrying fishing rods should look out for electricity power lines overhead. Our safety communications were conveyed to over 336,000 members of the public throughout our areas of operation between April 2022 and March 2023.

Our performance in numbers¹



¹ Please note that for reporting purposes we have followed the established industry practice of not including fatal accidents in the lost time injury (LTI) category. This in no way diminishes the impact of the death of our valued colleague this year.



1 The number of injuries where employees needed at least a full day off work due to injuries in 2022/23¹.

Combining innovative learning tools with Open Data to make building safer

We are working with the building trade to make digging safer. We are encouraging builders to plan their work in as much detail as possible. Requesting cable plans of the area where they will be working is an important part of this planning, particularly for private builders carrying out work such as small house builds or extensions, laying driveways and excavation work.

By combining the Dig Safe tool that you can read about in this section with a comprehensive set of cable plans, builders and their contractors are able to plan their digging carefully with free and open access to all the data they need.

“ Building sites are dangerous environments for many reasons, especially if electrical cables are involved. Health and safety procedures are therefore paramount to the smooth running and safety of a project. Builders need to ensure that they are up to date with the latest safety guidelines surrounding live cables and have this drilled into the teams working on site.”

Brian Berry
Chief Executive at the Federation of Master Builders

OPERATIONAL PERFORMANCE

A reliable network

Keeping the lights on for 8.5 million homes and businesses is central to our mission. In 2022/23 we once again far exceeded the targets set for us by Ofgem.

On this page you will see how we have performed against the following Sustainable Development Goals:



UK Power Networks has proved to be the most reliable of Britain's DNOs, outperforming the Ofgem targets by 33% in customer interruptions (CI) and 35% in customer minutes lost (CML) across the eight years of the R110-ED1 price control period that ran from 2015/16 to 2022/23.

Nevertheless, in 2022/23 our performance was not up to our usual standard. We strive to ensure that both the frequency and duration of customer interruptions are on a downward trend; in 2022/23 that was not the case. We are, however, confident that with hard work and significant investment in the network, focusing closely on the quality of supply, we will return to our usual market-leading levels of reliability before long.

No single factor accounts for the slight reduction in reliability of UK Power Networks in 2022/23; it resulted from a combination of unrelated, one-off events. The unprecedented hot weather in July 2022 contributed to faults on the network to a degree. To that end, we are reviewing the design of our overhead power lines in order to manage temperatures over 40°C, as it seems that such heat levels are more likely to occur in the future. A fire in one of our substations resulted in multiple, successive interruptions of power supply which in turn made a significant contribution to the decline in reliability. We are looking closely at our fire-management processes in order to avoid such a situation in the future.

Our push for ever-greater reliability continues to focus on two main fronts: finding new ways to prevent faults rather than waiting for them to need to be repaired and making greater use of remote control in order to restore customers' supplies more quickly and efficiently.

Prevention is better than cure

We have reported in previous years on how we are using devices called reclosers, both high and low voltage, to manage faults on the network. We aim to do this in a way that minimises the number of customers whose supply is interrupted as well as reducing the length of those interruptions. In 2022/23 we took this approach to the next level with the deployment of LV monitors across our networks.

By analysing the health of the network in detail, these devices allow us to predict where issues have the potential to develop into permanent faults. By examining fault data alongside asset age information, we can predict the optimum time to repair those sections that are approaching the point at which they are likely to begin to fail. Using this data, we are able to plan a replacement programme that will reduce the number of interruptions to the power supply.

Remote control

Employees travelling around our areas of operation to repair faulty networks is becoming increasingly rare. Remote control is the way forward. We continue to invest substantial funds, brainpower and time into finding better and more efficient ways of fixing our cables. We have developed ways to locate faults and restore the electricity network without a member of staff needing to attend the site in person, dramatically speeding up the restoration process.

This has been increasingly successful and, in recent years, UK Power Networks has had a target that no more than 300 customers will require the attendance of a member of our staff to provide manual intervention in the case of a power failure. Our target beyond 2022/23 is to reduce this 300 customer threshold further.

In order to be operated remotely, substations must be fitted with a piece of kit called an actuator that is paired with a communications hub. An actuator is a hydraulic version of a manual switch that allows us to halt the supply of electricity while we establish if there is a fault that we need to address. In most cases, our systems can reinstate the power automatically with no action from us. In doing so, fewer customers are affected for a shorter period of time when compared to manual intervention. We have now fitted 13,000 of our substations with this ability to restore the electricity network remotely, covering 24% of our distribution networks.

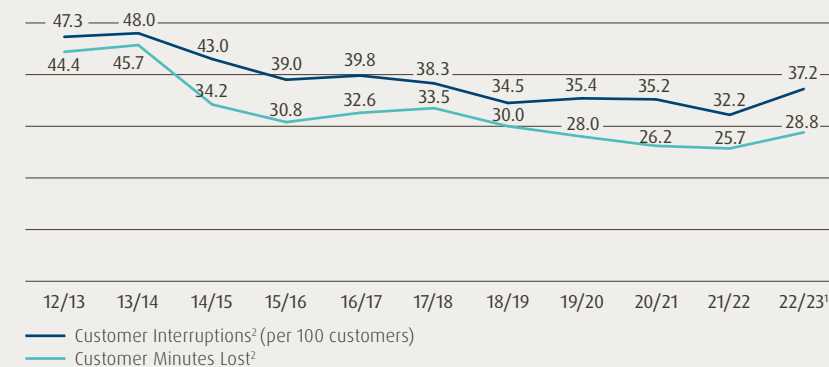
99.99%

Network reliability

No.1

LPN remains the No.1 network for both Customer Interruptions and Customer Minutes Lost

Our performance in numbers



1 2022/23 figures presented are provisional based on our regulatory submission at the date the accounts are signed.
2 Figures are a weighted average of the three licence areas and exclude exceptional events.

37.2 CIs

Our power cut performance has improved by 44% since 2010/11 when our CIs were at 66.1, which means customers now see an interruption on average once every 32 months, compared to an average of once every 18 months in 2010/11.

28.8 CMLs

A customer connected to our network will be off supply on average for less than half an hour per year. This is a 55% improvement over 2010/11, when the average duration was 64 minutes.



Putting LV monitors to the test

We are now using LV monitors to identify which parts of the network would need to be replaced and when. This forms part of our new strategy to 'fix before fail', improving the quality of supply to customers. Through the deployment of over 400 LV Monitoring devices, we have prevented the recurrence of more than 150 power cuts in the last year. A further 750 units are planned for deployment in 2023/24.

“ We have intercepted 27 faults before they became permanent. I believe this will revolutionise the way we work. The holy grail of proactive network management is to reach the point where a device detects when and where a cable is drawing abnormal current before the cable even blows a fuse.”

Nick Carey
Operations Manager at UK Power Networks



Keeping customers satisfied

In 2022/23 UK Power Networks' customer satisfaction score, as measured by the industry's Broad Measure of Customer Satisfaction, rose once more and now stands at 94%. This score is a concrete manifestation of the corporate culture that puts the customer at the heart of our business; we see the human being we are dealing with, not simply a set of technical problems to be solved.

On this page you will see how we have performed against the following Sustainable Development Goals:



In recent years, UK Power Networks has achieved a profound culture shift that permeates the business. We have put a great deal of time and energy into training our people in a way that focuses on how customers are affected by our operational work. Our employees are trained to think about how the customer in front of them is affected by whatever issue they are dealing with, whether that is a planned or unplanned power cut or the installation of a charging point so they can run an electric vehicle or anything else. The core of our approach to customer service and satisfaction is for our teams to put themselves in our customers' shoes and envisage the impact that our business has on their lives. We measure ourselves against three broad categories of service: power cuts, provision of connections and general enquiries. They all contribute in different ways to the overall experience of our customers and we are meeting our aim which is to be strong in all those areas.

Increasing demand for our services

The cost-of-living crisis has increased pressure on our services enormously. People are paying more for their power so they demand more from those providing it; everyone is being more careful about how they spend money and their habits are changing as they do all they can to reduce their bills. This has led to much less tolerance of poor service in all aspects of daily life.

In addition, the demand for our services has rocketed. On the one hand, those customers who are in a position to do so are looking to install low carbon technologies (LCT) in ever-greater volumes. On the other hand, local authorities are diverting funds towards supporting those in fuel poverty to be able to take advantage of the reduced bills that LCT provides. These factors all combine and the result is huge increases in the demand for connections that support LCT devices such as EVs, heat pumps, solar panels and battery storage facilities. Compared with the last regulatory year, we have seen the number of LCT installations more than double in 2022/23.

Automation speeds up decision-making

It is an enormous challenge to meet such an increase in demand in the context of ever-more exacting customer requirements. Nevertheless, in 2022/23, UK Power Networks achieved a greater than ever customer satisfaction score across all areas of service and in all three networks. We did this in part by automating many of our processes relating to the vast volume of calls coming into our call centre, enabling us to triage and deal with them in the appropriate sequence. Thanks to automation, we are now often able to respond quickly, and the journey is much easier for our customers, meaning less effort to get an LCT installation.

The essentials of customer care

In recent years we have recognised the importance to customers of accurate information about when their power will be restored. It is an important part of making our service personal. We have worked hard to refine our Estimated Restoration Times, so that customers know as quickly and as accurately as possible when they can expect to have their power restored. Technology and training are helping our field teams to improve upon the accuracy and timeliness of the information we provide to customers, which is a key driver for customer satisfaction.



A troubleshooting team on the ground

We monitor our customer satisfaction levels frequently and closely, so we know what is happening where and are alerted quickly if there is a problem. We have a troubleshooting team on the ground, backed up with rafts of data, to support the field teams. In many cases, our systems alert us to potential problems before they happen and the troubleshooting team can step in and fix things before they cause inconvenience to customers. If the team spots more generic problems, they can ensure these are addressed through training, adjustments to the processes or whatever else they judge necessary.

Making connections easier for everyone

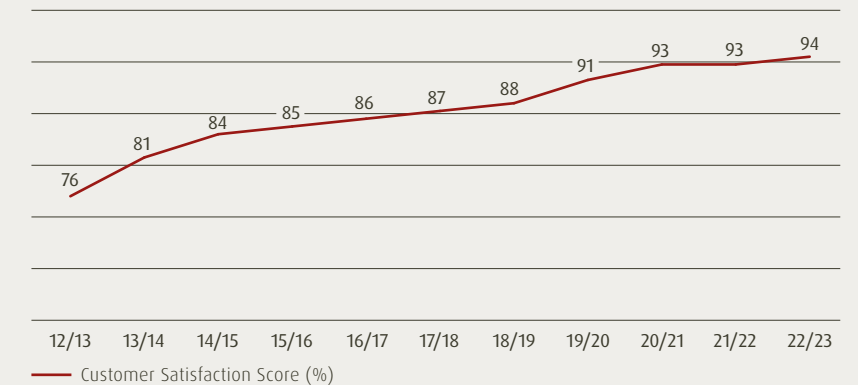
The combined influences of the cost-of-living crisis and the requirement to achieve Net Zero emissions mean that uptake of LCT such as heat pumps, EVs, solar and battery storage is rising fast. This, in turn, means that demand for our connections service is enormous. We have made strides, using automation and technology, in speeding up the connections process for our customers; this involves an element of self-service to get the installation underway. We help customers to have, at their fingertips, the information that we need in order to give them a quote. These systems have helped reduce the waiting time for getting quotes to our customers by more than a month.

In 2021 we launched the UK's first self-service product for domestic customers seeking an electricity supply upgrade to connect an LCT, reducing the lead time for applications from 10 days to a matter of minutes. The service now handles more than 7000 applications per month, with 79% auto-approved in Q4 2022/23, at a 96.5% satisfaction.



Five-star rating and 19 times more reviews than all other DNOs combined

Ofgem's Broad Measure of Customer Satisfaction



94%

Our highest ever customer satisfaction score



Ranked No.1

Ofgem ranked us No.1 for our Broad Measure of Customer Satisfaction score

Roman Reign to the rescue

During a storm in 2022, a call centre agent took a call from a customer about a power cut. The customer's son, who has autism, was particularly affected by the power cut as he was afraid of the dark. During the call, it emerged that the customer's son was also a fan of Roman Reign, the WWE wrestling champion; he would protect them from the dark. Once the agent had addressed everything necessary to deal with the power cut, they logged on to the company's Amazon account and had an action toy figure of Roman Reign sent to the customer's address within a couple of hours.

The call agent listened to what was important to the customer and did what they could to minimise the impact - fear of the dark - in this unique case. Others might need a particular sort of food, or the ability to manage their medication. The principle remains: listen to what matters to the customer and reduce the impact of the power failure as much as possible.



Every employee I spoke with was incredibly kind, patient and caring; they provided a sense of comfort and trust. They kept me in the loop during the entire outage and followed up to make sure I was ok the next day once the power was back. This was some of the best customer service I've ever had!"

Efour

A customer review on Trustpilot



OPERATIONAL PERFORMANCE

Value for money

In 2022/23 we were more acutely aware than ever of the financial strain that our customers are under and the need for us to spend their money wisely and cautiously. Providing value for money for our customers is a deep-rooted principle across our business and the cost-of-living crisis has sharpened our focus on this even more.

On this page you will see how we have performed against the following Sustainable Development Goals:



The transition to LCT such as EVs, heat pumps, solar power generation and battery storage offer dual benefits to our customers as they do to the whole of society. Although they can be relatively expensive to install or buy, these technologies not only cut carbon emissions, they are also much cheaper to run than their conventional equivalents.

Making it easier for customers to access low carbon technologies

The ease of upgrading customers' power supply is an important factor in a straightforward transition to LCTs. In 2022/23, UK Power Networks was the UK's leading supplier of this type of upgrade, with a customer satisfaction score of 96.6%.

The vast majority (97%) of domestic applications for an LCT upgrade now come through our online portal and in Q4 of 2022/23, 79% of them were approved automatically, reducing the lead time by up to 10 days. This automatic processing of applications has also meant we needed 15 fewer people handling them, even though there were seven times more requests compared to 2021/22, saving money all round.

As well as making it easier to get approval for an LCT connection, we also supported solar and battery installers to use our self-service portal in order to speed up the auto-approval process. We published a video user guide and worked with third-party online influencers to promote the portal and its benefits for all installers. Our ring-fenced team provides ongoing support and proactively contacts and advises installers who are not consistently benefitting from these low-effort automated tools, enabling a faster,

more streamlined experience for customers. This means customers see the benefit of lower bills more quickly, and avoid additional reinforcement costs of an average of £15,000.

UK Power Networks supported nearly 50,000 battery and solar installations in 2022/23. Nearly 40,000 households are expected to benefit from up to 61% lower electricity bills, saving them an average of £710 per year.

Improving efficiency for businesses

We have also made it easier and cheaper for businesses converting their vehicle fleets from petrol or diesel to electric power. Previously, it took 25 days for a fleet manager to assess their electrification options. Thanks to our self-service site planning tool, it now takes an average of under four hours.

Collaborating to improve efficiency

We look for ways to make life easier for our customers as well as saving them money. For example, as you can read on page 39, we have worked with energy supplier Octopus, training their engineers to install fuse upgrades so the customer only needs one visit in order to have the equipment in place to start using LCT, rather than the disruption of multiple visits.

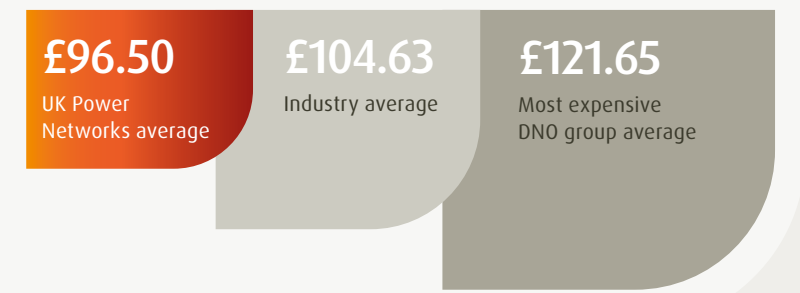
Similarly, in East London, we have teamed up with Thames Water, the Mayor of London's Infrastructure Service and the London Borough of Tower Hamlets, to make roadworks less inconvenient, as well as saving money. The four organisations are working together in an initiative called 'Dig Once' that ensures that, if the road is being dug up, full advantage will be taken of the digging in order to install everything that might be needed at the same time. For example, the Isle of Dogs in Tower Hamlets is a high growth area likely to need new utilities for future developments, so we took the opportunity to lay extra cable ducts during current excavations work in Byng Street. This is a common-sense, streamlined approach that will minimise disruption overall and reduce costs in the long term.

New process brings greater efficiencies and better value for money

In 2021 we launched the UK's first self-service product for domestic customers seeking an upgrade to their electricity supply to connect LCT. In 2022/23 we made changes to the process that have delivered a number of savings. Starting with EV and heat pump applications, we applied robotic process automation (RPA) to the process. This significantly increased the rate of auto-approvals and freed up the people who had been processing applications manually. Following the success of these changes, we extended the trial to solar installations and then on to the most complex applications. The lead times to approval have shortened by up to 10 days, saving up to a total of over half a million days since launch. We have also saved on the work time equivalent of 15 employees, have avoided £3.4m reinforcement costs that we would otherwise have had to invest, and have delivered £8.8m in societal benefits through reduced carbon emissions and improved air quality resulting from the replacement of carbon emitting equipment with low carbon technologies.

Annual domestic charges (2015/16 – 2022/23)

Domestic unrestricted customers based on a typical annual consumption value of 2,900 kWh.



8%
lower annual domestic charges than the industry average

Cutting power costs and emissions in London office block

A typical office block needs to be kept at 21-22 degrees centigrade. By simply changing the times of the day at which the aircon is running and avoiding running at full power during the peak period, buildings can help reduce demand on the network. The minor change in temperature is imperceptible to most workers, and offices can earn revenue from the electricity network.

Taking a smarter approach to using capacity on the network frees up space for more low carbon technologies like electric vehicle chargers and heat pumps to connect more quickly and at lower cost.

“ We are pleased to be supporting UK Power Networks in providing demand side response services to a landmark London building. The building's owners will benefit from lower costs and carbon emissions, without the occupants noticing a difference in comfort levels. We see this as the future in balancing grid supply and demand issues and providing vital services to DNOs like UK Power Networks. We are now looking forward to rolling out our solution across multiple buildings in London and across the UK.”

Rajvant Nijhar
CEO at BankEnergi



OPERATIONAL PERFORMANCE

Innovation and the path towards Net Zero

Innovation is the lifeblood of UK Power Networks and, in recent years, the increasingly urgent pursuit of a Net Zero economy has been the engine that drives our continuing quest for innovations that make what we offer better, cheaper, greener or easier for our customers.

On this page you will see how we have performed against the following Sustainable Development Goals:



Greener buses in London

In 2022/23 we continued to support Transport for London (TfL) in its plan to introduce electric buses across the capital. In Sutton in South West London, we have fast-tracked electricity infrastructure work to allow 84 new electric buses to charge up, as part of the Green Recovery Scheme. This includes a new high voltage underground cable along a 1.5 km route.

In Brixton, greener buses are operating from a South London bus garage, thanks to a new electricity connection. We completed work at the Arriva garage in Brixton, to enable new electric buses to charge overnight. The project represents a major contribution towards reducing local pollution levels, at the same time helping to enable the UK's transition to Net Zero. The work has reduced running costs for the bus garage, which is able to charge its new fleet when local electricity demand is very low. There are now 1,000 electric buses operating in London, enabled by our electricity upgrades, and improving air quality.

Looking for alternatives to diesel powered mobile generators

Mobile generators are crucial for our business because we need to provide our customers with a source of electricity during prolonged power cuts. Mobile generators traditionally run on diesel so are a source of greenhouse gases as well as being noisy. In an industry-first trial, we used three cleaner fuels in mobile generators in a bid to reduce emissions and noise. The trial compared the reliability, performance and emissions of Britain's first hybrid glycerine generator with hybrid generators fuelled by Hydrotreated Vegetable Oil (HVO) and Liquefied Petroleum Gas (LPG). To reduce engine noise and improve air quality, the cleaner fuel engines also have batteries which can charge during the day so they can run quietly at night. The glycerine and HVO generators will also use solar panels to charge the battery.

Project Stratus – the world's first smart transformer trial

In February 2023 UK Power Networks unveiled the world's first smart transformer trial which is set to provide unparalleled network insights to help maintain reliable power supplies in the south of England. Our innovative Project Stratus will see smart electricity transformers installed in streets across East Sussex which, if successful, will provide live data on electricity usage and demand, on an unprecedented scale.

Using state-of-the-art power electronic technologies, the smart transformers can flexibly adapt to make sure power is directed when and where it is needed, balancing load on the network, and protecting against multiple kinds of potential faults.

With greater visibility of the low voltage network, our engineers will be able to safely release more capacity on the network during times of peak electricity demand. Stratus's optimisation algorithm can also seamlessly meet the changing needs of customers at different points of the day, without disrupting their energy supply.

Data is central to innovation and Net Zero

The accessibility of data is a recurring theme in our review of innovation and the path to Net Zero this year. Our Open Data strategy is bearing fruit and the following projects demonstrate how vital an innovative approach to data is to designing and deploying new solutions.

A new cross-industry group called the Industry Data for Society Partnership (IDSP) was launched in December 2022 and UK Power Networks is one of the founding members. Other founding members include Hewlett Packard Enterprise, LinkedIn, Microsoft and Northumbrian Water Group. The IDSP is a first-of-its-kind cross-industry partnership to help advance more open and accessible private-sector data for societal good. The founding members of the IDSP agree to provide greater access to their data, where appropriate, to help tackle some of the world's most pressing challenges in areas such as sustainability and inclusive economic growth. We have proven to be a core member, writing papers and participating in the current data challenge. We recognise that the value and power of Open Data is multiplied when you bring together data from different sectors. We are excited to see what ideas come from our new shared data partnership.

Open access to a wealth of real-life data on EV fleets

Optimise Prime, one of UK Power Networks' most important innovation projects of recent years, concluded its live trials in June 2022. Started in 2019, this was a large-scale trial collecting real world data from over 6,000 commercial EVs, providing unparalleled insight into the future of electric fleets and the needs of businesses regarding EV charging infrastructure.

A joint project with Hitachi, Scottish and Southern Electricity Networks along with the UK's biggest fleet operators – Uber, Royal Mail and British Gas – the project gathered data on when, where and how often employees charge their work EVs, be that on the go, at home or in a depot. This enormously valuable dataset has now been released on UK Power Networks' Open Data platform and is available for anyone to analyse and use for their own purposes.

UK Power Networks is committed to maximum possible transparency of data, so anyone working towards enabling the Net Zero economy has open access to an unparalleled dataset that will help shape low carbon transportation. For example, insights into where more public chargers will be needed by 2030 to support charging for all 45,000 London Uber drivers and the required electricity network upgrades will be shared with local authorities to support their community decarbonisation plans.

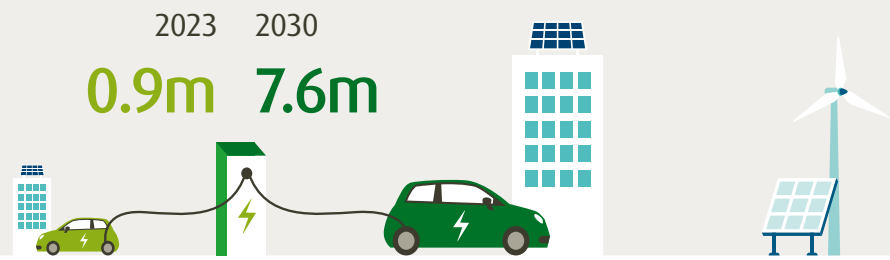
Sharing vital datasets with local authorities

Continuing the theme of open access to data, UK Power Networks has made it easier than ever before for local authorities to deliver their Net Zero plans. Many local authorities across the UK have declared climate emergencies and have undertaken to deliver Net Zero by 2050 in line with the UK Government's commitment. Our pioneering approach to data is providing more than 100 datasets all in one place. In partnership with local authorities including Essex County Council and the Greater London Authority, we have identified a series of datasets needed by local authorities to inform Net Zero plans. They are available for anyone to use, on UK Power Networks' Open Data Portal and will be continuously updated.

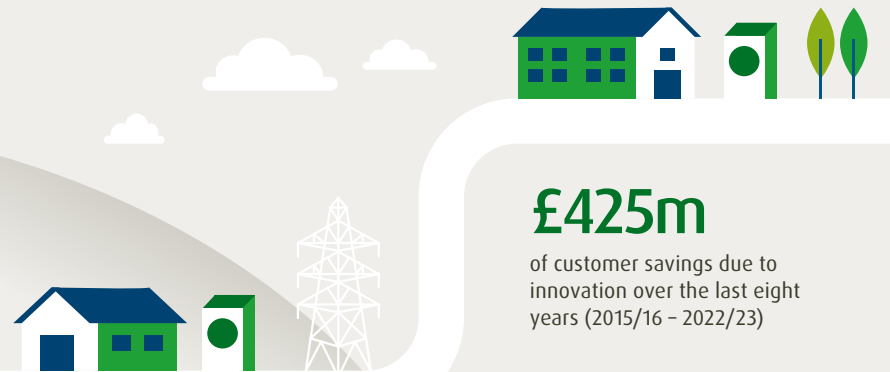
Datasets ranging from wind speeds, flood zones and socio-economic data to electricity network maps and information showing where there is spare electrical capacity, are free to use. The majority of the information on the portal is coming from partners, highlighting the importance of working collaboratively and going beyond the energy industry. Having truly open, local, data such as this all in one place will help local authorities understand where to start and what factors they need to consider in order to reach Net Zero quickly and cost-effectively.

Low Carbon Technologies predicted growth

By 2030, 7.6m LCT¹ are expected to be connected to our network.



¹ LCT includes EVs, heat pumps, district heating connections and homes with solar panels.



Making switching to heat pumps easier

In an innovative move, UK Power Networks has developed a new process to make it faster and easier for customers to switch to heat pumps. Working with Octopus energy, we have streamlined the process so customers don't have to wait for the required fuse upgrade. We have trained Octopus Energy engineers to perform the upgrades at the same time as installing the heat pump. This makes life much easier for the customer and will help to speed up the rollout of heat pumps across the UK. The trial was such a success that it is being extended to EV charger installations too.

“UK Power Networks has shown vision through initiating this project and worked closely with us to prove this can be done in a compliant and safe way. We would like to see more suppliers and DNOs follow in our footsteps to make sure houses across the country have the means to decarbonise quickly and easily.”

John Szymik
CEO of Octopus Energy Services



TRANSPARENCY

A business open to scrutiny

The energy industry as a whole is rightly under the spotlight at the moment. As part of the industry, and as a monopoly provider of an essential service, UK Power Networks is committed to being transparent to anyone who seeks to understand us; in fact, we welcome such scrutiny.

On this page you will see how we have performed against the following Sustainable Development Goals:



We are happy for all our stakeholders, and particularly our customers, to be able to look closely at all aspects of our business. Data relating to our performance, such as safety, reliability and customer satisfaction, as well as financial and environmental performance, are open to everyone to see. This year under review, 2022/23, more than ever we have championed the concept of Open Data. We have published our strategy towards Open Data as we believe that in our field, it is a vital enabler in creating a more competitive energy market and supporting decarbonisation of the energy system. We are determined and committed to improving third party access to, and use of, our network and asset data in line with our 2021 Digitalisation Strategy and Action Plan.

Incentivising our employees

Our goal as a business has not changed since we started as an independent business in 2010: to deliver what our customers want at the lowest possible cost. We have made enormous progress since our earliest days, especially in terms of safety, the reliability of our networks and customer service. We have achieved all this at the same time as being the lowest cost DNO in Great Britain.

We are financially incentivised to beat targets for reliability and customer service that are set by our regulator, Ofgem. We are penalised if we fail to meet them. External assessors verify all the relevant information before we submit our performance figures to Ofgem, and our customers are welcome to see evidence that these rewards are warranted. In 2022/23 we earned £77.8 million from these Ofgem incentive schemes.

More generally, we do our best to make it easy for all our stakeholders to examine our performance. This Annual Review is an example of this principle, along with a number of other reports such as our RII0-ED1 commitments report.

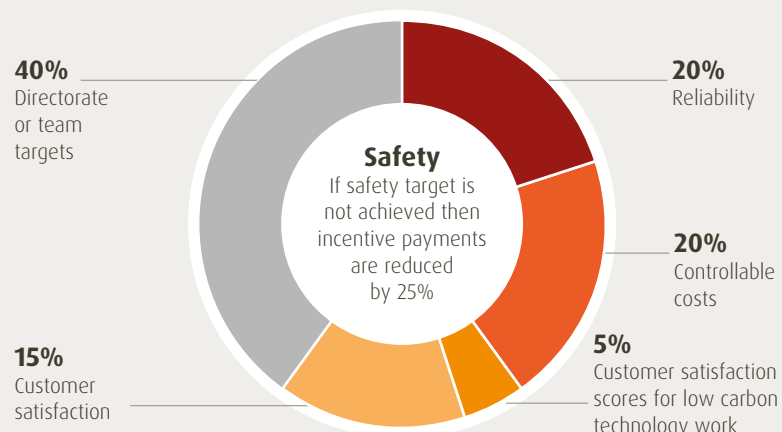
UK Power Networks incentivises employees in line with the key elements of our published business vision. That means everyone is working towards common goals that the company has agreed with its stakeholders. Employees are rewarded for achievements in the areas of safety, network reliability, customer service and cost saving. We achieve this through our employee bonus scheme – the Company Incentive Plan – which promotes the delivery of our business vision.

90%

of UK Power Networks employees are covered by Trade Union Collective Agreements



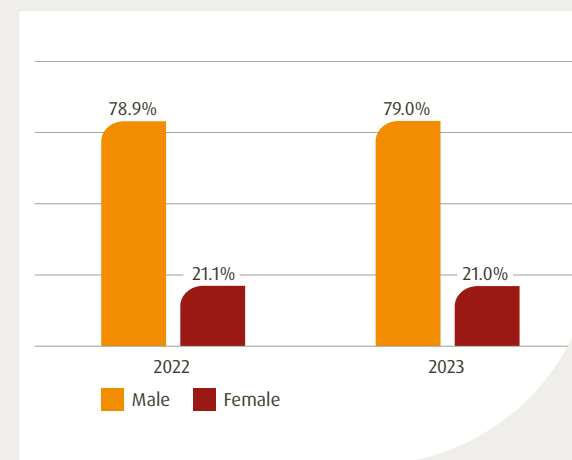
Main Company Incentive Plan for all employees Linking performance with delivery for customers



Gender mix

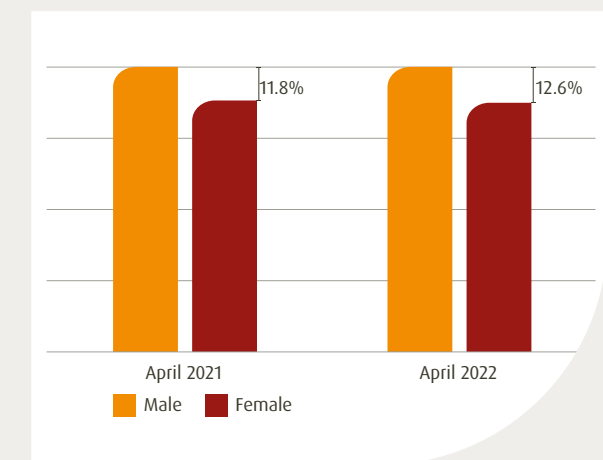
In common with the whole utilities industry, UK Power Networks continues to be a male-dominated business. Our industry, along with engineering in general, has deep roots in being traditionally male-dominated, and such traditions take time to change, but we are working hard to redress the balance, see page 24.

Education has a crucial role to play in making those changes and we work closely with a number of schools and further education establishments, challenging stereotypes and encouraging greater take-up among women and girls of the relevant STEM subjects (science, technology, engineering and maths).



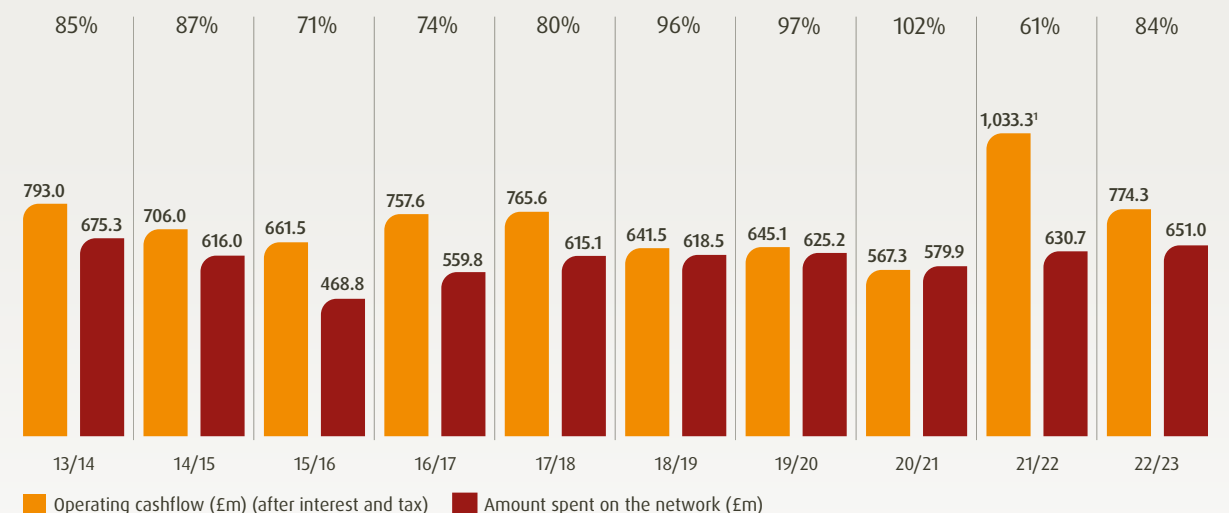
Gender pay gap

Over the six years since we have been reporting on our gender pay gap, UK Power Networks has seen an overall improvement of 15% on our median gender gap, and you can read on pages 24 and 25 in this Annual Review the efforts we are making to continue to improve in this regard. In April 2022 we had a median Gender Pay Gap of 12.6% compared to a gap of 11.8% in April 2021. There was a slight widening of our median gender pay gap in April 2022 compared to the figures reported in April 2021. This was the result of changes in the composition of our workforce. The median salary of the 350 men who left was lower than the all-male median salary and the median salary of the 98 women who left was correspondingly higher. The combined effect of this resulted in a slight increase in the median gender pay gap in April 2022.



Investment on the network

The capital-intensive nature of our business means that it can be misleading to compare our profit margins to those of service or retail companies. Long-term investment in new and existing assets are not taken into account in annual profit margins. In our view, it is a more helpful measure to compare how a business is investing the cash it generates. Over the past 12 years we have, on average, invested 84% of the cash that we generate from operations back into our infrastructure assets to benefit the 19 million people connected to our networks.



¹ The operating cashflow after interest and tax in 2021/22 is high due to an exceptional amount of £174m settled on intercompany loans during 2021/22.

ORGANISATIONAL RESILIENCE

A robust, prepared business

The aim of our organisational resilience team is to consider a whole range of eventualities, from the likely to the improbable to the virtually unimaginable, and to prepare for such events in a way that balances the likelihood of the threat with the potential for disruption.

On this page you will see how we have performed against the following Sustainable Development Goals:



UK Power Networks provides a vital service for society and a major interruption to our services has a significant impact on society at large, so we are continually considering and refreshing the possible scenarios that pose a threat to our business.

Finding parallels

By and large, we are not in the business of making accurate predictions, but we do our best to consider the types of events or circumstances that could jeopardise our operations. As an organisation, we are continually scanning world events to identify potential threats or risks to our ability to keep the lights on, and we look at the world in an imaginative way in order to see parallels in circumstances that are not immediately obvious, drawing lessons from these and absorbing them into our way of working.

Planning for a possible global energy shortage

We did not predict Russia's invasion of Ukraine in 2021 but had considered the possibility of and probable mitigations for a global energy shortage. As the winter of 2022/23 approached following the conflict in Ukraine there was a real possibility of the requirement for the whole of the UK energy industry to deploy a programme of planned emergency power cuts. These planned and carefully programmed interruptions, called Rota Load Disconnections,

are designed to be used as a last resort in the case of an emergency energy shortage. They vary in duration, and customers might lose power for up to three hours a day on an area-by-area basis. This ensures that customers have power for most of the day and that the supplies are shared fairly. These measures are very rare and temporary and have not been used in the UK since the 1970s. Although they were highly unlikely to be required, we needed to be prepared in case they were.

We understand the frustration these emergency disconnections may cause our customers and so we conducted a sensitively designed programme of communications to inform and engage with our vulnerable customers and their carers about the possibility of energy rationing. We encouraged them to consider in advance both the possible impact of such measures and putting in place appropriate plans. We took great care to make sure they understood the position without alarming them unduly.

Plan for the worst and hope for the best

As with much of the work we do to build our organisational resilience, we hoped that our planning would not need to be put into action, and this proved to be the case for the Rota Load Disconnection planning. A number of factors contributed to our not needing to go down that path: it was a relatively mild winter and, as it

turned out, the unprecedentedly high price of energy meant that people – businesses and domestic customers – were voluntarily reducing their power consumption to save money. Together, this led to relatively low consumption levels that meant reserves of energy did not go below the threshold to trigger Rota Load Disconnections. Nevertheless, the preparations we made were undoubtedly valuable and we continue to revise and refresh them; we may yet need to execute these plans as the war continues.

Resilience forums

As usual, we held a series of resilience forums in 2022/23, covering all aspects of our operations. These meetings allow representatives from across the business to step away from the demands of their jobs and consider 'what if...' in the context of a range of subjects such as IT resilience, emergency planning, and health and safety. We encourage the attendees to let their imagination off the leash and push the boundaries to picture threats to the business, likely and unlikely, so that together we can examine the scenarios from all angles in order to prepare appropriately. This year, we added Employee Resilience, which includes but is not limited to the mental well-being of our staff.



Resilience in Design

Outside influences are highly valuable in resilience planning. There is always something to learn from others. To that end, along with our colleagues in our commercial arm UK Power Networks Services, we have joined a collaborative forum called Resilience in Design. This brings together, on a 'Chatham House' basis, practitioners from a wide range of industries with the aim of sharing, discussing and learning from each other about current issues, challenges and practical approaches in relation to achieving a truly resilient organisation.



In our Emergency Planning Forum, we looked at the possible effects of Rota Load disconnections as set out. We also examined a terrorist incident on a substation in North Carolina in the United States which resulted in a whole town of about 45,000 inhabitants being without electricity for several days. We were interested to investigate the effect of such a widespread power outage, where a whole community was affected at once.

This sort of scenario prompted us to review our High Impact Low Probability plans using the 'what if...' approach, taking a look at how we would manage such an event.

An emerging threat – extreme high temperatures

UK Power Networks is used to dealing with high winds, heavy rain and snow, but in 2022 we faced a less established threat: temperatures rising above 40°C. These temperatures presented us with unusual operational challenges, but thanks to our disciplined approach to planning, including careful watching of long-term weather forecasts, we had measures in place to mitigate the impact. For example, we were quickly able to revise shift patterns so that field staff were out and about in the heat for shorter periods. In some cases, we redeployed staff from other duties to make it less arduous for those working in the field, often in heavy protective equipment that is essential for their safety.

A new code of practice from the Cabinet Office

UK Power Networks continues to engage with the Cabinet Office Emergency Planning College (EPC) in conducting an annual review of the overall resilience capabilities of UK Power Networks against BS 65000. Since its first review in 2015 until the most recent (2021), we have improved our ratings every year. Our target is to ensure we continue to maintain those improvements and to further enhance our levels of resilience.

BS 65000 was reviewed in 2022 and the outcome is a new code of practice, BS 65000:2022, which will change the format of future reviews. We are awaiting guidance from the EPC on those changes so that we can prepare for future reviews.



UK POWER NETWORKS SERVICES

Safe, sustainable power networks for the UK's infrastructure

UK Power Networks Services is the commercial arm of UK Power Networks that manages private energy networks and delivers major national power infrastructure projects for customers on a competitive, commercial basis.

Safety first

The safety of our employees, contractors and the general public remains our first priority and we are pleased to report that 2022/23 was the seventh year in a row with no Lost Time Injuries (LTIs) for UK Power Networks Services. We are all too aware, however, that complacency is the enemy of vigilance and we continue to work hard to ensure that everyone working in our business is alert to what could constitute a hazard.

One of our ongoing safety awareness campaigns is our push to identify – collectively among our 500 or so employees and contractors – 5,000 potential hazards that we face in our day-to-day business. This not only has the effect of alerting colleagues to where danger may lie, it also provides the stimulus for many and various conversations about what does and does not create the circumstances for a potential accident waiting to happen.

Port of Felixstowe

In 2022/23 UK Power Networks Services consolidated its reputation as a leader in the power networks of the UK's ports. In June 2022, we won a contract to take the Port of Felixstowe a step closer to its Net Zero ambitions. One of Europe's largest ports and the biggest in the UK, 40% of all the UK's container traffic goes through the Port of Felixstowe.

Our contract with the port is to supply new electrical technology needed to allow it to reduce its reliance on red diesel, meet its Net Zero aspirations, reduce emissions and increase the resilience of its electricity network. The three-year decarbonisation project for the Port of Felixstowe includes upgrading the existing 11,000-volt electricity network to power the 17 new electric gantry cranes. These cranes help load and unload some of the four million containers that go through the port each year. It will also allow the Port of Felixstowe to replace its existing diesel vehicles that transport containers around the port with 48 new electric tractor units.

The Port of Felixstowe is close to a residential area so as well as reducing emissions and improving air quality at the port, this electrification project also provides an important additional advantage of reduced noise in the vicinity.

Twenty years supporting HS1

In 2022/23 UK Power Networks Services celebrated 20 years of supporting the HS1 train line from London's St Pancras International to the Channel Tunnel in Folkestone. We designed and built the line's electricity infrastructure and operate and maintain it under a 50-year contract. This was the first major new train line to be built in the UK in over a century and is, to date, its only high-speed line. We are immensely proud of our work on HS1, in particular the remarkable 99.99% availability record that we have achieved.

In order to maintain this level of performance, we invested close to £10m in the HS1 network this year. Our contract with HS1 extends over 50 years and our investment this year saw the upgrading of the system that manages the power lines remotely as well as the IT system that manages and analyses the infrastructure to deliver power to the train line.

Power upgrade for the Piccadilly Line

In June 2022 we began a project to design and construct works to upgrade several key electrical substations, and install new infrastructure, control systems and cables along key parts of the Piccadilly Line. The new equipment will allow Transport for London (TfL) to launch a new fleet of air-conditioned trains. Overall, the Piccadilly Line upgrade will allow for a 23% increase in peak capacity, with a train running every 135 seconds at the busiest times from 2027.

Helping Yorkshire Water meet its Net Zero ambitions

In 2021, UK Power Networks Services opened an office in Salford, Greater Manchester, with a view to providing services for businesses locally in the area. From that office we have worked with Manchester Airport on a range of projects and, in 2022, we were awarded a significant contract by Yorkshire Water to help them achieve their target of Net Zero operational emissions by 2030. In one of the largest schemes of its type in the UK, we are deploying a system for Yorkshire Water that brings together all aspects of EV charging, including installation, operation, maintenance and management. We are installing EV chargers at offices, depots and at employees' homes so that staff drivers will be able to charge their vehicles at home, at work and on-the-go at public charge points. Fleet managers at Yorkshire Water will have access to a centralised digital platform to monitor and manage operations. Our team will also provide a 24/7 helpline for all drivers and we will proactively maintain the chargers. With our support, Yorkshire Water plans to install renewables, lower overall energy use and switch its entire fleet of vans and cars to electric by 2030.

Partnership with Veolia

UK Power Networks Services has been working with resource management company Veolia since 2006. We signed two important contracts with them in 2022/23; one was to support Yeovil District Hospital in its ambition to decarbonise, in line with the government's strategy of encouraging hospitals and the NHS in general to achieve Net Zero carbon emissions by 2050. The second was a project to help Veolia introduce electric refuse collection vehicles across Westminster City Council.

Our clients

Our portfolio includes a range of high-profile organisations from both the public and private sectors, including five of London's airports, High Speed 1, Network Rail, London Underground, Southern Water, Aspire (Ministry of Defence) and Canary Wharf.



Accreditations

Our accreditations reflect our world-class engineering capability, safety and quality record, and enable our work with the UK's leading companies.



EV charging hub for bp pulse

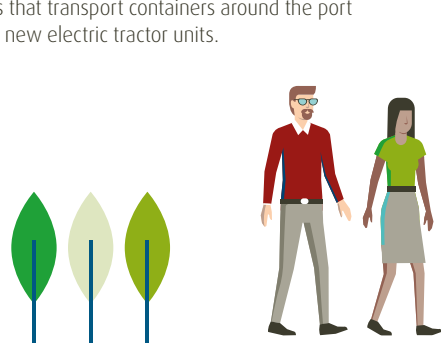
UK Power Networks Services worked with bp pulse to install 22 50 kW rapid electric vehicle chargers below Park Lane in central London. The new chargers allow local taxis, private hire vehicles and fleets to electrify and reduce emissions in the capital.

Installing a rapid charging hub in an underground car park brings two major engineering challenges: the first challenge is how to safely and seamlessly fit industrial-scale electricity substations into a confined space. The second is how to manage capacity constraints with the local electricity network.

We worked closely with our client to overcome the challenges by guiding them through the grid-connection process, including meeting regulations and design standards to install the chargers on time and on budget.

“We weren't just looking for someone who supplied labour. We needed to rely on [our partner's] expertise to guide us through the process... it is a complex undertaking and we needed partnership and collaboration.”

Dave Watson
Project Manager, bp pulse



OUR FINANCIAL PERFORMANCE

A good year

The tables below summarise the key financial information for our three networks regulated by Ofgem.

Eastern Power Networks plc, serving North London and East Anglia										
£m	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23 ²
Turnover	551.4	608.7	607.4	636.1	642.6	625.4	652.1	670.0	715.1	863.1
EBITDA (Earnings Before Interest, Tax, Depreciation and Amortisation)	356.9	411.6	416.8	449.3	448.0	447.3	468.2	470.6	503.6	545.3
Tax paid/(credit)	13.1	30.4	28.9	21.4	46.8	38.7	75.6	37.1	92.3	87.6
Profit after Tax	221.5	115.3	178.8	128.4	185.3	162.3	207.1	164.0	52.0	304.3
Operating cashflow post capex, interest and tax	4.9	16.2	19.3	59.5	60.2	23.0	7.3	(80.5)	212.3	39.1
Capital expenditure	307.1	288.1	182.9	234.9	249.2	255.5	265.2	251.1	267.0	278.5
Net debt ¹	1,438.1	1,588.5	1,593.5	1,629.8	1,706.2	1,804.3	1,880.0	1,868.7	1,933.0	1,992.1
Regulated asset value (RAV) ²	2,332.2	2,413.5	2,436.1	2,540.5	2,630.4	2,705.4	2,773.5	2,855.6	3,170.0	3,557.3
Net debt to RAV	62%	66%	65%	64%	65%	67%	68%	65%	61%	56%
Incentive earned (2012/13 prices)	14.9	28.4	24.8	24.6	20.6	26.2	27.2	27.7	28.4	24.5

London Power Networks plc, serving Inner London										
£m	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23 ²
Turnover	481.5	497.0	462.0	502.3	501.5	491.9	517.4	519.3	523.6	624.0
EBITDA (Earnings Before Interest, Tax, Depreciation and Amortisation)	349.9	356.2	317.7	347.4	367.4	361.5	389.4	392.0	385.8	421.7
Tax paid/(credit)	24.0	51.2	23.6	31.8	46.1	50.4	66.2	45.3	101.5	50.2
Profit after Tax	234.1	193.6	161.0	167.4	183.6	165.9	178.6	195.7	106.0	188.4
Operating cashflow post capex, interest and tax	63.9	49.6	127.5	65.1	48.6	9.0	6.9	27.6	138.4	113.3
Capital expenditure	192.2	186.6	138.3	155.7	186.9	174.8	178.3	173.3	189.4	175.9
Net debt ¹	970.0	989.1	967.9	1,046.6	1,067.9	1,098.1	1,155.7	1,184.3	1,214.4	1,225.3
Regulated asset value (RAV) ²	1,468.3	1,484.7	1,509.7	1,581.7	1,648.2	1,700.0	1,746.3	1,792.9	2,000.5	2,248.6
Net debt to RAV	66%	67%	64%	66%	65%	65%	66%	66%	61%	55%
Incentive earned (2012/13 prices)	8.7	12.7	15.7	16.2	17.2	17.7	17.7	18.1	18.3	16.9

South Eastern Power Networks plc, serving South London, Kent, East Sussex and parts of Surrey and West Sussex										
£m	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23 ²
Turnover	394.8	404.8	388.7	449.0	421.3	405.2	427.5	455.5	493.3	581.6
EBITDA (Earnings Before Interest, Tax, Depreciation and Amortisation)	288.0	298.6	279.0	330.1	305.2	293.8	315.0	333.3	353.2	367.3
Tax paid/(credit)	19.5	39.4	20.3	33.4	35.9	34.1	50.7	37.1	92.4	43.3
Profit after Tax	179.8	151.6	126.9	173.6	139.8	126.2	127.9	157.3	112.1	168.6
Operating cashflow post capex, interest and tax	48.9	24.2	45.9	73.2	41.7	(9.0)	5.7	40.3	51.9	(29.1)
Capital expenditure	189.6	154.6	114.6	152.7	160.3	174.9	166.7	151.7	167.5	195.5
Net debt ¹	956.0	1,023.6	980.9	1,025.1	1,095.5	1,146.5	1,225.5	1,218.0	1,240.8	1,334.1
Regulated asset value (RAV) ²	1,484.5	1,514.1	1,541.8	1,630.2	1,703.2	1,762.8	1,814.5	1,862.3	2,061.4	2,335.3
Net debt to RAV	64%	68%	64%	63%	64%	65%	68%	65%	60%	57%
Incentive earned (2012/13 prices)	13.8	22.2	14.8	14.8	12.7	13.1	14.8	15.0	16.1	6.3

¹ Net debt is defined within certain of the company's covenant arrangements.

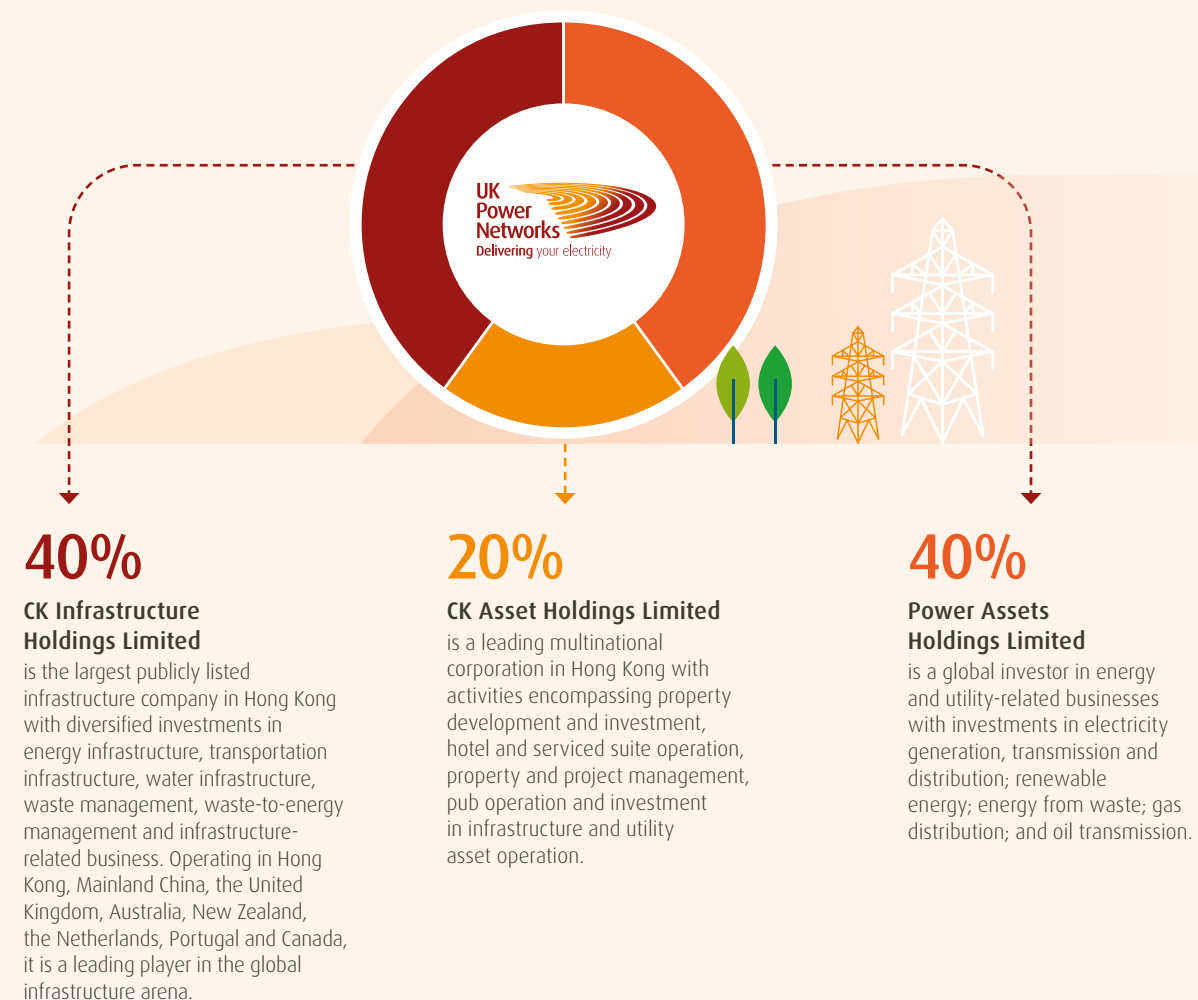
² 2022/23 RAV presented is provisional at the date the accounts are signed. Discussion with Ofgem may result in RAV being increased or decreased. The prior year comparatives have been restated to reflect the latest agreed position.

OUR OWNERSHIP

A structure for long-term stability

UK Power Networks is part of the Cheung Kong Group (CKG). Operating in more than 52 countries, CKG has a proven track record in managing high-quality utility companies for the long term. It successfully operates electricity and gas distribution businesses serving communities in Hong Kong, Great Britain, Australia and New Zealand.

Our shareholding structure



Cheung Kong Infrastructure



BOARD OF DIRECTORS

Strategic direction and governance

The Board of Directors of UK Power Networks is responsible for agreeing strategy, overseeing performance and discharging certain legal responsibilities. The Board delegates day-to-day responsibility for running the group to the UK Power Networks Executive Management Team, with specialist tasks passed to various Board committees.

Kam Hing Lam
Director – UK Power Networks Holdings Limited and certain of UK Power Networks' wholly owned subsidiaries



Mr Kam has been the Group Managing Director of CK Infrastructure Holdings Limited since its incorporation in May 1996. He is an Advisor of the 12th Beijing Municipal Committee of the Chinese People's Political Consultative Conference of the People's Republic of China. He holds a Bachelor of Science degree in Engineering and a Master's degree in Business Administration.

Andrew John Hunter
Director and Chairman – UK Power Networks Holdings Limited and UK Power Networks' wholly owned subsidiaries



Mr Hunter has been an Executive Director of CK Infrastructure Holdings Limited (CKI) since December 2006 and Deputy Managing Director of CKI since May 2010. He holds a Master of Arts degree and a Master's degree in Business Administration. A member of the Institute of Chartered Accountants of Scotland and of the Hong Kong Institute of Certified Public Accountants, he has over 34 years of experience in accounting and financial management.

Dominic Chan
Director – UK Power Networks Holdings Limited and UK Power Networks' wholly owned subsidiaries



Mr Chan is an Executive Director and the Chief Financial Officer of CK Infrastructure Holdings Limited. He is also an Executive Director of Power Assets Holdings Limited. He is a Fellow of the Hong Kong Institute of Certified Public Accountants, and of the Association of Chartered Certified Accountants, and he is a member of the Institute of Certified Management Accountants (Australia).

Charles Tsai
Director – UK Power Networks Holdings Limited and certain of UK Power Networks' wholly owned subsidiaries



Mr Tsai joined the group in 1987 and was appointed to the Board and Chief Executive Office in January 2014. He is the Chief Executive Officer of Power Assets Investments Limited, a wholly owned subsidiary of the company. He is also a Director or Alternate Director of most of the subsidiaries and certain joint ventures of the company.

He holds a Bachelor of Applied Science Degree in Mechanical Engineering, and is a Registered Professional Engineer and a Chartered Engineer.

Ka Man Jenny Yu
Director – UK Power Networks Holdings Limited and certain of UK Power Networks' wholly owned subsidiaries



Ms Yu has worked for the Power Assets Group since 2016. She is a Senior Manager (International Business) of Power Assets Holdings Limited. She has over 20 years of experience in energy industry with international business exposure.

She holds a Master of Business Administration degree. She is a fellow of the Association of Chartered Certified Accountants, a member of the Hong Kong Institute of Certified Public Accountants and a member of The Hong Kong Institute of Directors. She is also a Certified Environmental, Social and Governance Analyst of The European Federation of Financial Analysts Societies.

Ivan Chan
Director – UK Power Networks Holdings Limited and certain of UK Power Networks' wholly owned subsidiaries



Chief Planning and Investment Officer, Mr Chan has been with CK Infrastructure Holdings Limited since September 1999. He is also the Chief Financial Officer of Power Assets Holdings Limited. He has over 30 years of experience in investment, banking and finance. He holds a Bachelor's degree in Science, a Bachelor's degree in Chinese Law and a Master's degree in Business Administration.

Neil McGee

Director – UK Power Networks Holdings Limited and certain of UK Power Networks' wholly owned subsidiaries



Mr McGee is an Executive Director of Power Assets Holdings Limited and the Managing Director of Hutchison Whampoa Europe S.A.R.L. He holds a Bachelor of Arts degree and a Bachelor of Law degree.

Paul Jeffery

Sufficiently Independent Director of London Power Networks plc, Eastern Power Networks plc and South Eastern Power Networks plc



Mr Jeffery was previously a Managing Director and Head of the European Power Utility & Infrastructure Investment Banking team at Barclays. He is also a Non-Executive Director of Southern Gas Networks Limited, Scotland Gas Networks Limited and Saeta Yield S.A.

Dr Edmond Ho
Director – UK Power Networks Holdings Limited and certain of UK Power Networks' wholly owned subsidiaries



Dr Ho joined the UK Power Networks Board of Directors in 2022. As a Director of Hutchison Property Group, he oversees all property development and investment portfolios in the UK. He has delivered numerous prestigious, large-scale, mixed-use developments in London. He holds Bachelor's, Master's and Doctor's degrees in Science in Engineering and has substantial property development, property management and construction experience in the UK.

Duncan Macrae
Director – UK Power Networks Holdings Limited and certain of UK Power Networks' wholly owned subsidiaries



Mr Macrae is the Head of International Business. He joined CK Infrastructure Holdings Limited in February 2011 and has over 23 years of experience in the infrastructure investment field. He holds Bachelor's and Master's degrees in Philosophy, Politics and Economics and is a member of the Institute of Directors in the United Kingdom.

Christopher Clarke
Sufficiently Independent Director of London Power Networks plc, Eastern Power Networks plc and South Eastern Power Networks plc



Mr Clarke was admitted as a Solicitor of the Supreme Court of England and Wales in 1974. He spent over 30 years practising in Asia and specialised in corporate and regulatory work. He previously served as an Independent Non-Executive Director of two companies listed on the Hong Kong Stock Exchange and is currently a Director of Myanmar Strategic Holdings Limited and a council member of the Royal Society for Asian Affairs.

Basil Scarsella
Director – UK Power Networks Holdings Limited and UK Power Networks' wholly owned subsidiaries; Chief Executive Officer UK Power Networks group of companies



Mr Scarsella has been Chief Executive Officer of UK Power Networks Holdings Limited since its establishment in late 2010. He has a degree in Economics and is a Certified Practising Accountant. He is a Life Member of Football Australia and received the Australian Sports Medal in 2000. In 2003 he became a Member of the Order of Australia (AM) for his services to sport.

Man Ka Keung Simon
Director – UK Power Networks Holdings Limited and certain of UK Power Networks' wholly owned subsidiaries



Mr Man joined CKG in December 1987 and is an Executive Committee Member and General Manager in the Accounts Department of CK Asset Holdings Limited. He is an Alternate Director to Mr Tak Chuen Edmond Ip as well as holding the posts of Deputy Chairman and Executive Director of CK Infrastructure Holdings Limited. In addition, he is a board member of the Community Chest of Hong Kong. Mr Man has over 41 years of experience in accounting, auditing, tax and finance. He holds a Bachelor's degree in Economics and is a member of Chartered Accountants Australia and New Zealand.

EXECUTIVE MANAGEMENT TEAM

Strong, experienced leadership

Our Executive Management Team has collective responsibility for running our business and executing our strategy.



Barry Hatton
Director of Asset
Management

Barry is responsible for the development and deployment of network and asset strategies for optimising investment and performance. He has over 40 years' experience in the operations and management of electricity distribution networks. Barry is a Chartered Electrical Engineer and a Fellow of the Institution of Engineering and Technology, and has a Master's degree in Technology Management.



Patrick Clarke
Director of Network
Operations

Patrick has day-to-day responsibility for managing the distribution of electricity to over eight million homes and businesses across London, the South East and East of England. He joined the industry in 1978 and has risen from an apprentice to an executive director over that period. He holds an Honorary Doctorate in Engineering, an OBE, an MBA and an MA.



Nirmal Kotecha
Director of Capital
Programme

Nirmal joined in 2011 as Director of Capital Programme & Procurement, having previously held the position of Major Projects Director at the Highways Agency. Before that he led the procurement and capital delivery function at Anglian Water Services. Nirmal holds an MBA and is a Fellow of the Chartered Institute of Purchasing and Supply and the Institution of Civil Engineers.



Suleman Alli
Director of Finance,
Regulation, Strategy
and Technology

Suleman is responsible for Finance, Strategy, Regulation and Technology at UK Power Networks. He joined in 2015, having previously led the utility network operation practice in the UK for Accenture. Suleman has over 20 years' utilities experience, delivering business transformation, company restructures and operational performance improvement across gas, electricity and water sectors. He holds a BSc (Hons) from the London School of Economics and Political Science.



Mark Adolphus
Director of Health,
Safety, Sustainability
and Connections

Mark is responsible for UK Power Networks' Health, Safety, Sustainability and Connections business. He joined London Electricity in 1992 as an engineering graduate trainee and has enjoyed a diverse career across a number of operational, engineering and commercial roles. Mark is a Chartered Electrical Engineer and holds a Master's degree in engineering business management from Warwick Business School and a degree in Electrical Engineering from the University of Leicester.



David Mitchell
Director of UK Power
Networks Services

David leads UK Power Networks Services. He is a chartered electrical engineer who joined the organisation in 1980 as an apprentice, achieving a degree in Electrical Engineering at Southampton University and an MBA at Brighton University. He has held several senior posts within the company, most recently as Head of Client Delivery overseeing long-term airport and military contracts as well as delivering major infrastructure projects.



Andrew Pace
Director of HR,
Legal, Risk and
Assurance, and
Company Secretary

Andrew joined UK Power Networks in January 2018 and is responsible for HR, Legal and the Company Secretary function. He has over 25 years' HR leadership experience, predominantly in the construction and infrastructure sectors. Andrew held various HR leadership roles with John Laing, Rio Tinto and Balfour Beatty. Prior to joining UK Power Networks, Andrew was Executive Director, construction and infrastructure at Morgan Sindall. He holds an MBA from Nottingham Trent Business School and is a Chartered member of the Institute of Personnel and Development.



Ian Cameron
Director of Customer
Services and
Innovation

Ian's responsibilities at UK Power Networks include customer service, stakeholder engagement, innovation and facilitating Net Zero. He has over 25 years' international experience in the electricity distribution networks industry. His background is in network operations, capital construction and connections, with a specific focus on renewables and process optimisation. Ian holds two degrees, one in Electrical Engineering and another in Mechanical Engineering.



**Sotiris
Georgiopoulos**
Director of
Distribution System
Operator

Sotiris leads UK Power Networks' Distribution System Operator. He joined the organisation in 2005 and for the last decade has championed innovative ways to plan and operate our networks such as flexible connections and the development of flexibility markets.

Sotiris is Chair of the ENA's Open Networks project. He studied electrical engineering at the University of Manchester and has an MBA from the University of Cambridge.

Key contacts

General enquiries

0800 029 4285

Emergencies or power cuts (24 hours a day)

Free power cut helpline 3-digit number:

105 or 0800 31 63 105

Please note this number is free to call from mobile phones

Text message updates during a power cut

To keep updated during a power cut Search, Track and Report Power Cuts on our dedicated website:

<https://www.ukpowernetworks.co.uk/power-cut>

Text Relay

We offer a 24-hour Text Relay service for customers who are deaf, hard of hearing or have any other communication difficulties. For more information, visit:

www.ukpowernetworks.co.uk

Connection services

0800 029 4280

Our unregulated business

services@ukpowernetworks.co.uk

Media enquiries

0330 159 1712



A full list of our contact details can be found at:
www.ukpowernetworks.co.uk



Visit our Annual Review website:
annualreview2023.ukpowernetworks.co.uk



UK Power Networks Holdings Limited

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www.ukpowernetworks.co.uk

UK Power Networks Holdings Limited is the holding company
of the companies in the UK Power Networks group of companies.