

Distribution Annual Report

2021 – 2022



2021/22 Highlights

Customer Service – We continually strive to improve and maintain our position as an industry leader in customer service.

9.19/10
customer satisfaction score

Continued our progression to be a leader in customer service across the UK by once again improving on our industry measure of customer satisfaction score.

24



Despite constraints from COVID-19 restrictions, we have continued to provide ongoing STEM and career development to support educational facilities resulting in 24 young people joining the vocational placements to give them valuable work experience.

6 years of Planet Mark



Our Business Carbon Footprint has been accredited Planet Mark's external verification certificate for the 6th year in a row.

88%

of all complaints were resolved within 1 day.

99.9%

Our electricity supply is available 99.9% of the time.

22%

Reduction in interruptions with the duration of those reduced by 30%. We are already exceeding our 2023 targets.

Service Delivery – We have delivered exactly what we said we would in our business plans, continuing to operate a safe and reliable network while saving customers money.

30p
per day



SPEN's Distribution component of domestic customer bills is around 30p per day – less expensive than a Netflix subscription. Average customer bills have also fallen by 12.1% in real terms since the start of the current price control.

695MW

We have accepted 694.6MW of flexibility bids in 2021/22.

The amount of hours completed for our Vulnerability Training Programme is

6,000

whilst also achieving a 94% employee satisfaction rate over 5 different types of training.

We connect 1/4 of all GB distribution connected wind

SPEN are at the forefront of decarbonising our energy system having connected over 2.6GW of wind to our distribution networks.



Support EV rollout

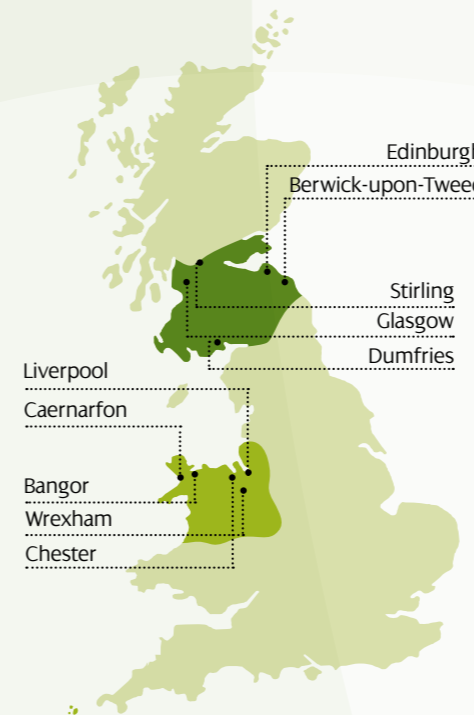
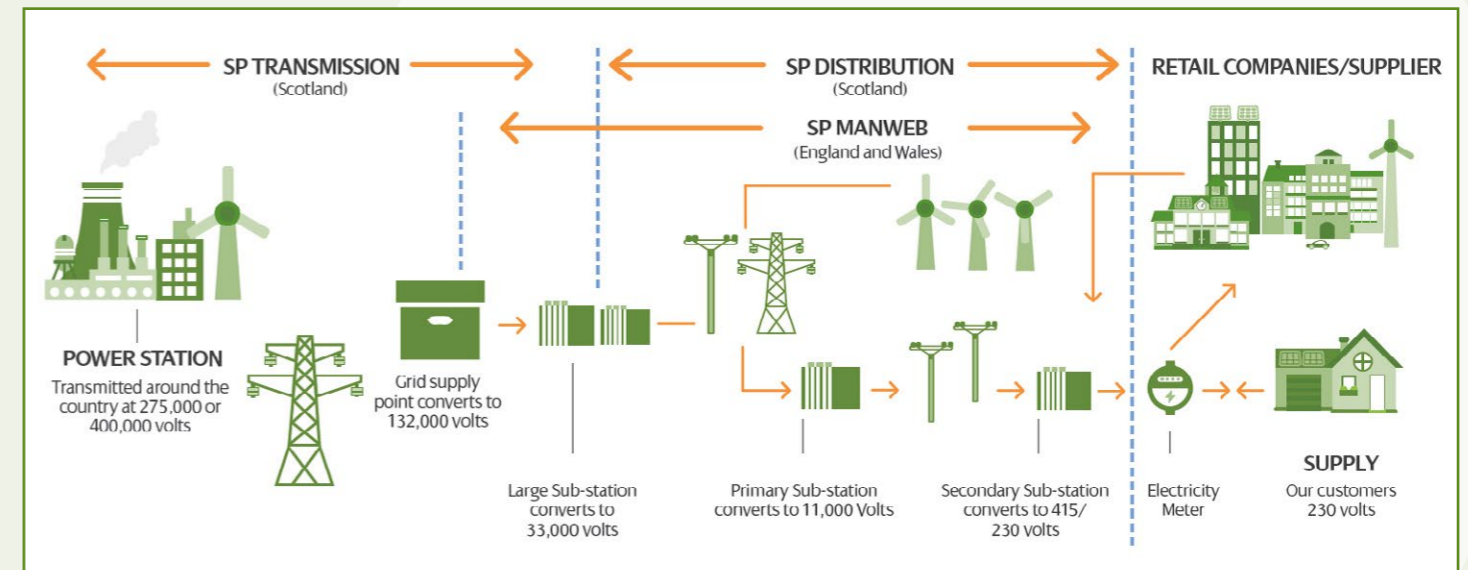
Ensuring people benefit from the wide scale EV (Electric Vehicles) uptake by finding innovative and cost-effective ways of developing, managing and operating EV charging infrastructure through our various projects (e.g. Project CHARGE).



We have successfully led the UK's first trial to shift low voltage electricity demand to maximise local network capabilities using aggregated customer flexibility.

Our Business

We transmit, distribute and connect electricity to and from homes and businesses over our network.



SP Manweb
1.5 million customers

SP Distribution
2 million customers

SP Energy Networks (SPEN) owns three regulated electricity network businesses in the UK; SP Distribution plc (SPD), SP Manweb plc (SPM) and SP Transmission plc (SPT). This report relates to the performance of our distribution companies, SPD and SPM during 2021/22.

We distribute power on behalf of energy supply companies through a network of cables and power lines that we own and maintain. We transmit, distribute and connect electricity to and from homes and businesses over our network. We work around the clock to keep the lights on 24 hours a day, every day of the year. We serve 3.5 million homes and businesses in three of the UK's largest cities (Liverpool, Glasgow and Edinburgh), as well as three large rural areas (North Wales, Scottish Borders and Dumfries & Galloway). We take electricity generated from power stations, wind farms and other utilities, reduce it to the low voltage needed for homes and transport it through our vast network of cables and power lines. Our distribution network alone has 33,300 substations, 38,392km of overhead lines and 67,768km of underground cables.

We provide customers with new or upgraded connections to our network. For example, to large residential, retail and industrial developments, as well as sports stadia and leisure parks. As the UK builds towards a low carbon future, the nature of the electricity grid is changing. Consumers no longer rely solely on centralised energy generation to meet their electricity demands. There are increasing volumes of smaller distributed generation and Low Carbon technologies such as electric vehicles being connected to the network. As network operators we need to adapt to meet these challenges whilst maintaining low cost, reliable energy distribution for our customers. It is our view that the right way to adapt is to extend the current role of the Distribution Network Operator (DNO), to that of a Distribution System Operator (DSO), which will allow us to plan and operate our networks more dynamically to meet changing customer needs.

Welcome

Foreword from Vicky Kelsall, CEO of SP Energy Networks

Welcome to our Distribution Annual Performance Report which provides our stakeholders with a comprehensive view of how we are tracking against the commitments we made in our Business Plan which covers the regulatory period from 2015/16 to 2022/23. Our report demonstrates that we have listened to stakeholders, and have seen great progress in many of the areas important to them. In our report, we hope it is clear that we have delivered exactly what we said we would in our Business Plans. We are a network operator which prides itself on its ability to follow through on its commitments whilst delivering superior customer service.

As the only Distribution Network Operator (DNO) to serve communities across England, Wales and Scotland, we have a critical role to play in supporting regional and national decarbonisation ambitions. We are focused on delivering a business in direct alignment with the priorities of our customers and stakeholders to tackle climate change and deliver the infrastructure and services required to deliver Net Zero. Our journey to a Net Zero future is already underway. In the last year, we have reduced our business carbon footprint by nearly 33% (excluding losses). We are supporting societal decarbonisation by enabling low carbon technologies, such as Electric Vehicles and Heat Pumps, to be connected to our network.

We recognise the importance of the current cost of living crisis and the impact it is having on us all, particularly those who are most vulnerable. We have an important role to play in supporting our communities through the energy transition and more – ensuring we go above and beyond for our communities and that no one is left behind. We are aware that the energy crisis will hit our customers hard, especially those who are already in fuel poverty. That is why we have geared up to support our partners' efforts in lending a helping hand to families.

Society rightly expects to consistently receive a reliable supply of electricity at the flick of a switch, which is why we continue to strive to exceed our ED1 regulatory commitments. This year has continued to see unprecedented challenges for the energy sector. We have continued to serve our distribution customers with 99.99% reliability levels for 30p per day.

Storm Arwen was the worst storm in recent years, described as a 1-in-40 year event. However, our staff worked hard during the storm to restore 88% of customers within 24 hours and 96% of customers within 48 hours. Former UK Energy Minister Rt Hon Charles Hendry CBE also led a review of our operational response to Storm Arwen, with a particular focus on the rural communities worst affected. This has helped to inform the actions we will take to improve our future performance in extreme weather events.

In the past year we have been working hard to ensure that the next price control running from 2023 to 2028, RIIO-ED2, is set in a way which readies the UK for an electric future. Our ED2 price control team have been engaged with you on our business plan which was submitted to Ofgem in December 2021, detailing investment of over £3bn. We now await Ofgem's final determination due at the end of 2022.

As part of our transition to a low carbon society, Electric Vehicles and Heat Pumps are now becoming a reality. Over the next decade, we also expect the generation capacity on our network to more than double. A flexible energy system is part of the solution, but ultimately network reinforcements are necessary. Our EV-Up and Heat-Up forecasting projects mean we know the likelihood of electric vehicle and heat pump uptake for every home in our areas. By more precisely understanding our customers' requirements, we have been able to more accurately determine where and when interventions are needed.

Our Distribution FES (Future Energy Scenarios) forecasts that 1.2m EVs and 1.1m Heat Pumps will connect to our own network by 2030. At the same time, we will also connect 5.88GW of generation.

SP Energy Networks holds the key to unlocking the Net Zero future for homes and businesses across our distribution areas. We have therefore created bold plans to ensure we can decarbonise in the most cost-effective way for consumers.



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Expenditure and Revenues

The key facts about our expenditure and revenue, and how it affects your bill.

Looking forward

Our view of key up and coming topical issues for 2022/23.

Appendices

Further, more detailed and disaggregated information about our performance has been published on our website.

SPD performance snapshot 2021/22

Performance Snapshot for our licensed area in Scotland (SPD).

Our network spans over once
round the globe



Innovation

We are continuing to deliver our ambitious innovation programme and have built a strong varied portfolio of projects which are impactful and deliver benefits for customers and communities as we move into RIIO ED-2.

Within RIIO ED-1, we have spent over £32 million on our NIA (Network Innovation Allowance) projects, 75% of which has gone to the wider community and industry. A large proportion of this has also gone to academic and SME partners, allowing us to benefit from their knowledge and resources. It has also allowed us to leverage £2 of funding for every £1 invested in our innovation.

We are now preparing for the start of RIIO ED-2 by concentrating on new innovation challenges. One vital challenge is the Strategic Innovation Funding (SIF) mechanism which aims to support network innovation that contributes to the achievement of net zero, while delivering net benefits to energy consumers. Since early 2021 we have been using and leveraging SIF funding to ensure that we have a positive impact on our customers and can enable the transition to the new energy system.

Safety

We complied with legislation, engaged with 3rd parties and members of the public to enhance safety awareness and continued to deliver our Occupational Health monitoring programme.

Environmental

In SPD we have 29km of fluid filled cables and topped up 39 litres in the 2021/22 reporting year with a leakage rate of 0.04%, we have also installed modern efficient heating, ventilation and air conditioning systems at our Bonnybridge and Dumfries depots. This will save an estimated 72,459 kWh of energy annually.

Network	Actual 2021/22	
Number of customers	2,016,358	
Total network length (km)	58,997	
Reliability and Availability	Actual 2021/22	Exceeding our CI Regulatory target of
Customer interruptions* (Recorded per 100 customers in 2020/21)	37.2	50.0 by 25.6%
Customer minutes lost* (Average number of minutes our customers had their supply interrupted)	27.2	40.5 by 32.9%
Customer Satisfaction	Actual 2021/22	12% This is 12% better than the regulatory target of 8.2. Overall ranking 7th place across all DNOs.
Customer satisfaction survey score out of 10	9.17	
Connections	Actual 2021/22	Our aim is to reduce how long it takes to provide a connection offer and the time it takes to make it all happen. This year we took on average less than 4 days to turnaround our connection quotations.
Time to quote (single premises)	3.97 days	
Time to connect (single premises)	34.24 days	
Incentive on Connections Engagement (ICE)	No penalty	
Stakeholder Engagement and Social Obligations	Actual 2021/22	We continue to work closely to identify the needs of vulnerable customers and stakeholders.
Stakeholder Engagement and Consumer Vulnerability score	5.29 out of 10	
Financials	Actual 2021/22 (2012/13 prices)	Our daily charges are considerably cheaper than a second class postage stamp, a TV Licence or typical domestic broadband services.
Unrestricted Domestic Tariff Charge for a typical domestic customer	£79.17	
Total expenditure	£191.9m	
Percentage of allowed expenditure	104%	

*excludes exceptional events

SPM performance snapshot 2021/22

Performance Snapshot for our licensed area in England and Wales (SPM).

Our Electricity supply is available
99.99%
of the time



Innovation

SPM is committed to innovation and realising its benefits to our local communities in Merseyside and North Wales. We are proud of our critical role in founding the Energy Innovation Centre in Ellesmere Port; supporting this centre as the gateway for local SMEs to large utility companies. Over 20 jobs were created and secured as EIC has now become recognised thanks to their great and continued efforts.

We are extremely delighted about the successful commission of Angle DC- an international flagship innovation project, pioneering the power of electronic devices on a 33kV network. By using this technology, our communities in Anglesey and Bangor can benefit from lower power losses, more stable supply and more integrated renewable generation. This £15m investment demonstrated our innovation excellence and put our community at the forefront of innovation.

Safety

We complied with legislation, engaged with 3rd parties and members of the public to enhance safety awareness and continued to deliver our Occupational Health monitoring programme.

Environmental

At the start of ED1 we set ourselves a target to reduce leakage in our SPM 132kV fluid filled cables. Since reporting year 2015/16 we have achieved an 84% reduction in fluid filled cable top ups in SPM.

In SPM we have 159km of fluid filled cables and topped up a total of 2,195 litres in the 2021/22 reporting year with a leakage rate of 0.3%.

*excludes exceptional events

Network	Actual 2021/22	Not all electricity networks are the same. Large parts of the SPM network are configured as an interconnected mesh whereas other distribution networks are mainly radial.
Number of customers	1,527,950	
Total network length (km)	47,501	
Reliability and Availability	Actual 2021/22	Exceeding our CI Regulatory target of
Customer interruptions* (Recorded per 100 customers in 2020/21)	31.0	35.9 by 13.5%
Customer minutes lost* (Average number of minutes our customers had their supply interrupted)	36.9	35.9 by 2.6%
Customer Satisfaction	Actual 2021/22	12% This is 12% better than the regulatory target of 8.2. Overall ranking 4th place across all DNOs.
Customer satisfaction survey score out of 10	9.21	
Connections	Actual 2021/22	Our aim is to reduce how long it takes to provide a connection offer and the time it takes to make it all happen. This year we took on average less than 5 days to turnaround our connection quotations.
Time to quote (single premises)	4.93 days	
Time to connect (single premises)	35.68 days	
Incentive on Connections Engagement (ICE)	No penalty	
Stakeholder Engagement and Social Obligations	Actual 2021/22	We continue to engage with our vulnerable customers and stakeholders.
Stakeholder Engagement and Consumer Vulnerability score	5.29 out of 10	
Financials	Actual 2021/22 (2012/13 prices)	Our daily charges are considerably cheaper than a second class postage stamp, a TV Licence or typical domestic broadband services.
Unrestricted Domestic Tariff Charge for a typical domestic customer	£96.96	
Total expenditure	£210.1m	
Percentage of allowed expenditure	103%	

2021/22 Outputs



2021/22 Outputs

Reliability and availability

A reliable supply of electricity to homes and businesses is priority number one; a message that our stakeholders consistently endorse. This includes when the network is put under pressure by extreme weather events.

Targets met (and in some cases exceeded) and good performance across range of indicators.

Examples of our performance in action

Storms

SPD:

Storm Arwen: 94,820 – 93.14% restored within 48hrs

Storm Barra: 11,648 – 99.98% restored within 24hrs

Storm Malik/Corrie: 34,076 – 99.99% restored within 48hrs

Storm Franklin: 15,927 – 100.00% restored within 24hrs

SPM:

Storm Arwen: 116,314 – 97.09% restored within 48hrs

Storm Barra: 11,241 – 99.94% restored within 24hrs

Storm Eunice: 16,925 – 99.31% restored within 24hrs

APRS (Automatic Power Restoration System)

APRS is an adaptive technology which will aim to restore as many customers as possible utilising available NCPs. APRS can only be deployed on radial networks. APRS was first deployed in SPD in Advisory Mode (APRS would trigger for a fault & propose restorative switching only) in June 2022 with a target Go-Live date of 1st November after which date APRS would execute any proposed switching. APRS will be of most benefit to circuits with NCPs deployed – within SPD there are approx. 3,100 11kV circuits of which approx. 1,400 have NCPs deployed. APRS will be deployed on these 1,400 circuits first. The development of APRS for the SPM network has just commenced and it is envisaged that APRS will be deployed on the SPM network around Q2 2023.

Enhancing network resilience

We are currently ahead of our commitments to Ofgem and The Department of Business Energy and Industrial Strategy (BEIS), having achieved 100% compliance with the flood resilience standard (ETR138) in 2015. Subsequently, updated flood modelling and maps have been issued by the relevant environmental agencies. A further 82 sites were identified as potentially at risk of flooding; 20 of these have had detailed risk assessments which confirm they are flood resilient, with mitigation work completed at a further 12. We are currently assessing the implications of the latest issue of ETR138 which recommends additional level of resilience to substations with 10,000 customers. This is another significant step towards our long-term goal of making our whole network resilient to severe weather events.

No power cuts of more than 12 hours

By 2023 we aim to have no customers experiencing a power cut of more than 12 hours. An overall increase of 160% by March 2022, due to 8 exceptional events.

Fewer and shorter power cuts

By 2023 we aim to have reduced the average amount of time our customers are off supply by 25%, by reducing interruptions by 7% and the duration of interruptions by 16%. With interruptions reducing by 22% and the duration of those interruptions reducing by 30%, we are already exceeding these targets.

Increase in the number of customers experiencing power cuts of more than 12 hours

Actual % increase this year

168%

Target for 2023

100%

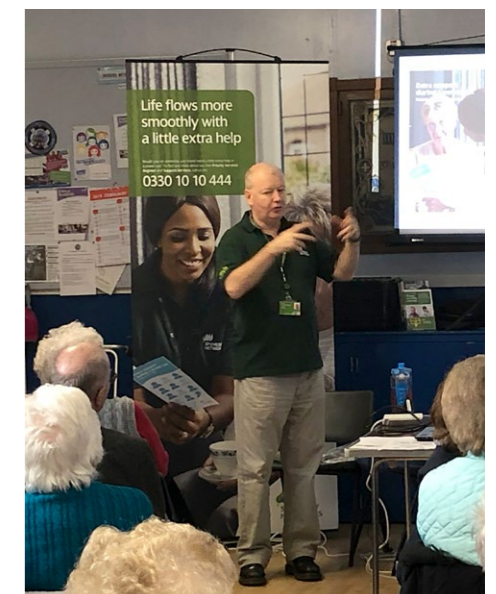
Reductions in the average time our customers are off supply

Actual % reduction this year

10%

Target for 2023

25%



Substantially ahead of 2021/22 target



On 2021/22 target



Partially or marginally below 2021/22 target



Substantially below 2021/22 target

Health & Safety

The health and safety of the public and of the people who work on our network is paramount. We pride ourselves on our excellent track record and our rigour in retaining this world class level of performance.

Targets met and good performance across a range of indicators. 

Examples of our performance in action

Safety Central, Lymm, Cheshire



Theatr Clwyd Pilot



Further background

- [Powerwise – educational website from SP Energy Networks that teaches children and young adults all about electricity and how to stay safe around it](#)

Vision and culture

We have a duty to ensure that our infrastructure is safe and all of our operations ensure the health and safety of everyone who comes into contact with its activities. Our vision is to deliver the highest standards of Health and Safety performance, where no injury, ill health is caused by our activities. The wellbeing of our customers, our people, our suppliers, and the public is our number one priority. We pride ourselves on sharing learning and pushing for best practice in everything we do and as such we are committed to promoting good health, safe behaviour and demonstrating care for the environment.

Our safety culture is led by our senior leadership team, defined by our Health and Safety Essentials and driven by the personal accountability and commitment from every employee.

COVID-19

Our staff continued to operate throughout the Pandemic providing a critical service to our customers. We implemented strict controls throughout and remained vigilant as society began to return to day-to-day life. We continue to monitor the situation closely and adjust our methods of working accordingly.

Public education

We consistently delivered clear and useful information on electrical safety. This has been carried out through safety campaigns, and attendance at events both physically as well as virtually throughout the global pandemic.

We have reached over 100,000 individuals through our Powerwise website aimed at electrical safety for children over a 5-year period. We have also reached over 94,900 children through Fixed Safety Education Centres as well as carrying out over 300 'Crucial Crew' events where attendance has been upwards of 40,000 pupils. We continued to support the ENA (Energy Networks Association) in relation to public safety and assist with ongoing campaigns and new content as well as promoting the construction safety film 'Look

Health & Safety (continued)

Out Look Up'. We participated in numerous regional agricultural shows and through the pandemic we continued to participate virtually.

In addition, we supported the National Farmers Union and National Forestry Industry through regular meetings promoting: safety; awareness of our assets; recurring incidents; supported training and awareness sessions. We also promoted and circulated any ongoing safety campaigns they have in relation to electrical safety.

We strive to raise electrical safety awareness with the public and construction sector through site visits and toolbox talks as well as initiatives and campaigns which include safety forums with the emergency services and fixed safety centres.

We continued to utilise our social media channels as well as external media channels (such as the Scottish Farming Leader) to reach different audience groups such as the agricultural industry, construction industry and general members of the public as well as promoting safety for children as part of our ongoing safety campaigns.

Support was provided to three safety centres to present key safety messages to children. This was done by providing them with annual funding and utilising interactive props and presentations in relation to substations and overhead powerlines.

Our Powerwise website has continually been promoted to schools and parents which is a curriculum-linked teaching resource to inform young people about the dangers of electricity, which provides free, interactive resources.

We have also worked alongside the emergency services providing them with awareness presentations as well as offering support to them when any incidents that have occurred. Various communication campaigns have been delivered throughout the year and significant work was done in conjunction with the ENA for the production and promotion of consistent energy and utility safety messages.

OHSAS 45001

SPEN successfully achieved OHSAS 45001 Re-certification in 2021 following a comprehensive audit process by our external certification body. There were numerous strengths identified, reflecting robust working practices and procedures and potentially can be used across our Business.

Making our networks safer

In 2021/22 we continued to reposition services and cables in older flats and tenement buildings to make them safer as part of our ongoing programme. We have also made progress on our programme to eradicate low overhead line clearances across roads. We actively engage with the Health and Safety Executive to communicate progress on these initiatives.

Our innovation focus remains firmly centred on our customers and stakeholders, who shape both our Innovation Strategy and innovation project portfolio, helping improve health and safety and delivery of our Business Plan

Keeping our staff and contractors safe

We participated in various initiatives and forums with a view to improving health and safety for all parties. Of particular note was a vehicle and plant safety initiative where we worked in conjunction with the ENA and contractor representatives to create consistent material and guidance which could be used across our industry.

Also of note, was the Utility Avoidance working group, which is a forum that met regularly with contractors for sharing best practices and ideas to reduce cable strikes.



Guarding Physical and Mental Health of Our Colleagues

We strongly recognise the 'Health' in health and safety and take measures to promote health and wellbeing for all our staff, promoting fitness and health as a lifestyle choice with initiatives such as the daily mile and access to gym facilities. Mental Health, wellbeing and the impact they can have continued to be a key focus and we provided a range of support services to staff.

In 2021 we employed a dedicated mental health and wellbeing specialist as part of our Occupational Health team. Initiatives delivered included a Mental Health Toolkit and training for Managers in partnership with the Scottish Association for Mental Health (SAMH), facilitation of an online/Teams event 'Looking after you: Loneliness – more impactful than you think' and a suite of 'Time to Talk' videos.

Health and Wellbeing



Customer satisfaction

Our customers have every right to expect a good experience when they interact with us – whatever the reason. We are committed to delivering this, and to improving year-on-year against the standard industry-wide metrics.

Exceeding targets in most areas, and continuing a trend of strong, sustained improvement, resolving nearly 90% of all complaints within 1 day and exceeding customer satisfaction targets.

Examples of our performance in action

Raising customer awareness:

We are continuing to raise awareness of who SPEN are, and to provide our customers with information of when and how to contact us.

As a result of our targeted awareness campaign raising activities since 2015. We have seen the number of people who know who to call in a power cut (SPEN via the 105 number) rise from 13% to 60%. In addition, 67% of our customer base is now registered for PSR.

POWER CUT? CALL 105

Powering your everyday

We keep your electricity flowing. In a power cut, call us on 105 – no matter who you pay your bill to.

SP ENERGY NETWORKS

For more information click here to visit our page.

POWER CUT? CALL 105

Sign up to our FREE Priority Services Register by clicking here or text PSR to 61999.

SP ENERGY NETWORKS

Providing extra support for those who need it most in a powercut.

Customer satisfaction

Our vision for 2023 is to achieve a score of 9.42 out of ten for Customer Satisfaction in Ofgem’s survey of DNO performance and to be a leader in Customer Service across the UK. This year’s score of 9.17 in SPD and 9.21 in SPM is slightly behind our RII0-ED1 commitment of 9.24 by 2023 after being impacted by storm Arwen.



Complaint handling

Our customers also need to trust us to handle any complaints properly. We handled 6,623 complaints and exceeded our target to resolve 80% of complaints within 1 day and 95% within 31 days against a target of 95%. We have received zero ‘repeat’ complaints and none of the 11 complaints which were escalated to the Energy Ombudsman were upheld. See appendix A.

Further background

- [Contact us](#)
- [Helpful advice during a power cut](#)
- [Home visits](#)
- [Flooding and power supply](#)

Responding and communicating

Our customers need to know that they can pick up the phone and talk to us. We have received 829,788 calls this year– of which 666,740 relate to power cuts. Our average time to answer the 666,740 calls was 31.14 seconds with only 6.1% abandoned. Our speed of answer was impacted due to higher volumes of customer calls during storms Arwen, Barrie, Corrie & Malik.



Stakeholder engagement

Our role is becoming even more central as we seek to rapidly decarbonise generation, transport and heat systems on the journey to Net Zero. We are committed to ensuring our customers, stakeholders and communities are an integral part of this journey.

Global leaders in stakeholder engagement – achieving 85% in the AccountAbility audit and in the top 10% of companies assessed globally

Performance in action – responding to stakeholder feedback

Over the last year, we have maintained high quality engagement with our customers and stakeholders, despite increasing levels of uncertainty as the Covid-19 pandemic evolved. Our proactive approach to engagement helps us build trust and strong relationships with our stakeholders, which is fundamental to delivering an effective Stakeholder Engagement Strategy – ensuring evolving needs and priorities sit at the core of our business.

Industry leading achievements

- Accepted 555MW of Flexibility Service Tender Bids
- First UK DNO to tender for Reactive Power Services
- 200% increase in public EV charging across two local authorities in SPD through Project PACE
- Innovative trial to support fuel-poor customers with new heating systems
- 10,000 properties in an area of high fuel poverty are benefiting from smart control technology to improve storage heater performance

Introduced two pilot projects to improve customer facing processes with a forecast annual benefit of £2.5million

Trialling the UK’s First ‘Clean Air’ Substation

Launched a new ‘Interactive Chatbot’ on our external website to improve our customers’ experience

We’re leading the way for our customers and stakeholders on the journey to Net Zero, ensuring we continue to engage on the topics that matter most to them and directly embed stakeholder feedback within our strategic decision making. At such an important time, it’s more essential than ever that our customers and stakeholders have their voices heard in this process.

We engage with a broad range of customers and stakeholders every single day to develop a comprehensive understanding of their needs and preferences and crucially, what they want us to deliver as a network operator. Our strategic priorities of **Develop a safe, secure & resilient network that’s ready for Net Zero, Be the trusted partner for customers, communities & stakeholders and Innovate to ready our business for a digital and sustainable future** have been created in direct alignment with the areas our customers and stakeholders have told us to focus on.

Develop a safe, secure & resilient network that’s ready for Net Zero

Within the next ten years alone, we expect the number of electric vehicles in our two distribution networks to increase to over 1.5m vehicles on the road, and with it, the requirement for EV charging will double the demand of electricity in a domestic property.

We’re working closely with our stakeholders to ensure a joined up approach that supports their individual needs and helps facilitate the significant impact on our networks.

We are working with all 32 Scottish councils and 18 across England and Wales to support with their decarbonisation plans. This year, we have hosted six workshops on EV charging installation and offered training for all Local Authorities.

We have completed EV optioneering for all Local Government Bodies across our SPM licence area, along with specific funding options and projects for Welsh Government’s EV rollout, targeting areas where the commercial market has not yet delivered.

We’re a key enabler to the decarbonisation of heat, but the concurrent increases in heat pumps means demand will increase beyond existing network limits.

We are taking learnings from our innovative Heat-Up project to support Scottish Government in producing a framework to support network solutions to facilitate the uptake of heat technologies.

In our SPM region, we are developing a decarbonisation pathway for Liverpool City Region Combined Authority to support the Region, including Chester, Cheshire West and Warrington.

Be the trusted partner for customers, communities & stakeholders

Given the criticality of the climate emergency, we are helping our communities across England, Scotland and Wales to embrace their low energy solutions in a way that is beneficial for local needs. Community energy is playing a crucial role in achieving Net Zero by increasing participation and embedding behaviour change. Community energy organisations are a critical part of the future energy system and in ensuring a Just Transition.

We’re leading the way in community energy through supporting the planning and development of key projects, aimed at supporting our local communities journey to Net Zero. We’ve established a number of partnership projects and collaborations with local community energy groups, building on work in this area, gaining wider stakeholder insight and building this into our plans.

Carlisle Development Trust (Level-Up)
The trial covers up to 150 households and four community buildings in Carlisle, allowing the increased uptake of LCT for our communities. Our initial estimates show that learnings from the project could save £185,000 in the Carlisle area and up to £300m across the UK.

Tanygrisiau Community Heating Project
We’re building a 11kV 1MVA substation in Tanygrisiau. The entire village will benefit from this network reinforcement, reducing costs and allowing the increased uptake of low carbon technologies in the area.

We continue to sponsor Community Energy England, Scotland and Wales in the production of the annual State of the Sector Report. This annual research activity is the most comprehensive and inclusive sector review of community energy in the UK.

Innovate to ready our business for a digital and sustainable future



From smart meters to artificial intelligence – digital technology is vital to unlocking the transition to Net Zero. Digital technology can significantly improve customer service by providing more choice for our customers and by accelerating the delivery of our services.

We're introducing new integrated digital and data solutions across our business to enable us to respond to the anticipated increase in customer contact as we support their decarbonisation journey. This will improve the services provided to our customers and stakeholders and make our operations more efficient.

We introduced an industry-first 'LV support room' which provides real-time data produced by smart meters and substations to highlight where a neutral fault will or is occurring on the network, allowing us to respond quicker. Our LV support room has identified 30 'pre-faults' so far, avoiding unnecessary outages for our customers and saving an estimated £60,000 in equipment damage and claims.

We've also established a new 'Data Hub' providing a single place for data sharing and enabling stakeholders to submit requests for data – helping make data freely available in a format that reflects the needs of our customers. We're collaborating with other UK based DNOs and the ENA to further develop the Data Hub capabilities, ensuring its suitability for the entire electricity network.

Our NAVI system brings together all the information we have about the network, allowing LV circuits to be traced, mapped, and information displayed in just a few mouse clicks. This helps us better predict customers' LCT uptake, and accurately assess the network impact of that uptake. We launched the NAVI system in 2021 and since then we've been working continuously with end-users across the business to enhance the platform – making sure it meets their requirements and expectations whilst still being aligned with our DSO objectives.

As a responsible network operator, we recognise we need to lead the transition to a more sustainable network and society. We're taking the steps to minimise the environmental impact of our business and network operations, making decisions that meet the needs of current and future network users.

We launched the UK's first Net Zero Substation using clean-air technology to reduce carbon emissions by 15% – the equivalent to 2.6 tonnes of CO2.

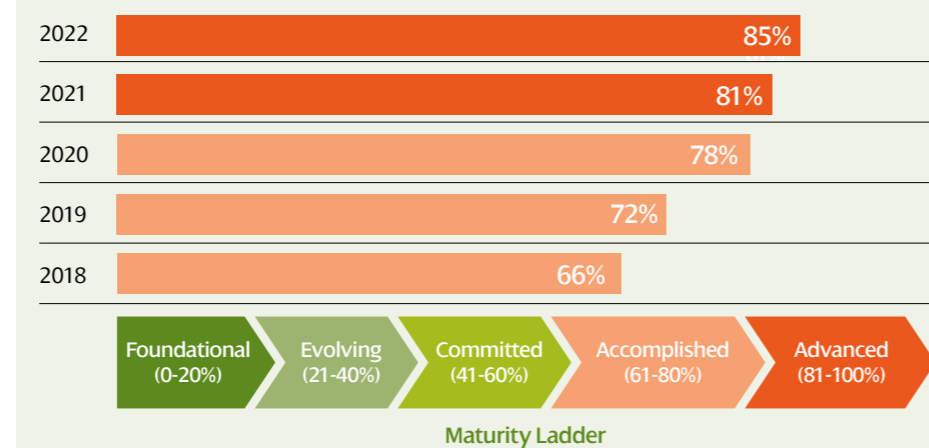
External validation

We continue to align our Stakeholder Engagement Strategy with the Stakeholder Engagement Standard AA1000 set by AccountAbility, the owners of the global standard. Every year, we are audited against this standard supporting our efforts to assess, design and implement our integrated approach to stakeholder engagement. It involves providing material evidence and detailed interviews with employees across 10 areas of the business from Directors to external stakeholders. This year, we're extremely proud to announce we remain to be one of the top scoring utilities for our AccountAbility healthcheck, with a score of 85%, a 19% improvement since our first healthcheck in 2018. We're not only one of the top scoring utilities for stakeholder engagement, but one of the top 10% of companies assessed globally, spanning multiple industries.

Created a comprehensive set of over 70 actions on the back of every recommendation to deliver continuous improvement across our entire organisation



AccountAbility Healthcheck Progress



Continuous improvements made in 2021/22 to our strategy

- 385 engagement opportunities in 2021/22, with a customer and stakeholder reach of over 191,000 through dialogue, consultations and information giving.
- Continuing to lead the industry with our Social Return on Investment (SROI) tool to measure value and provide a new level of insight into the value of our activities.
- Continuing to work in alignment with the principles of AccountAbility Stakeholder Engagement Standard AA1000 – Inclusivity, Materiality, Responsiveness and Impact.

Further background

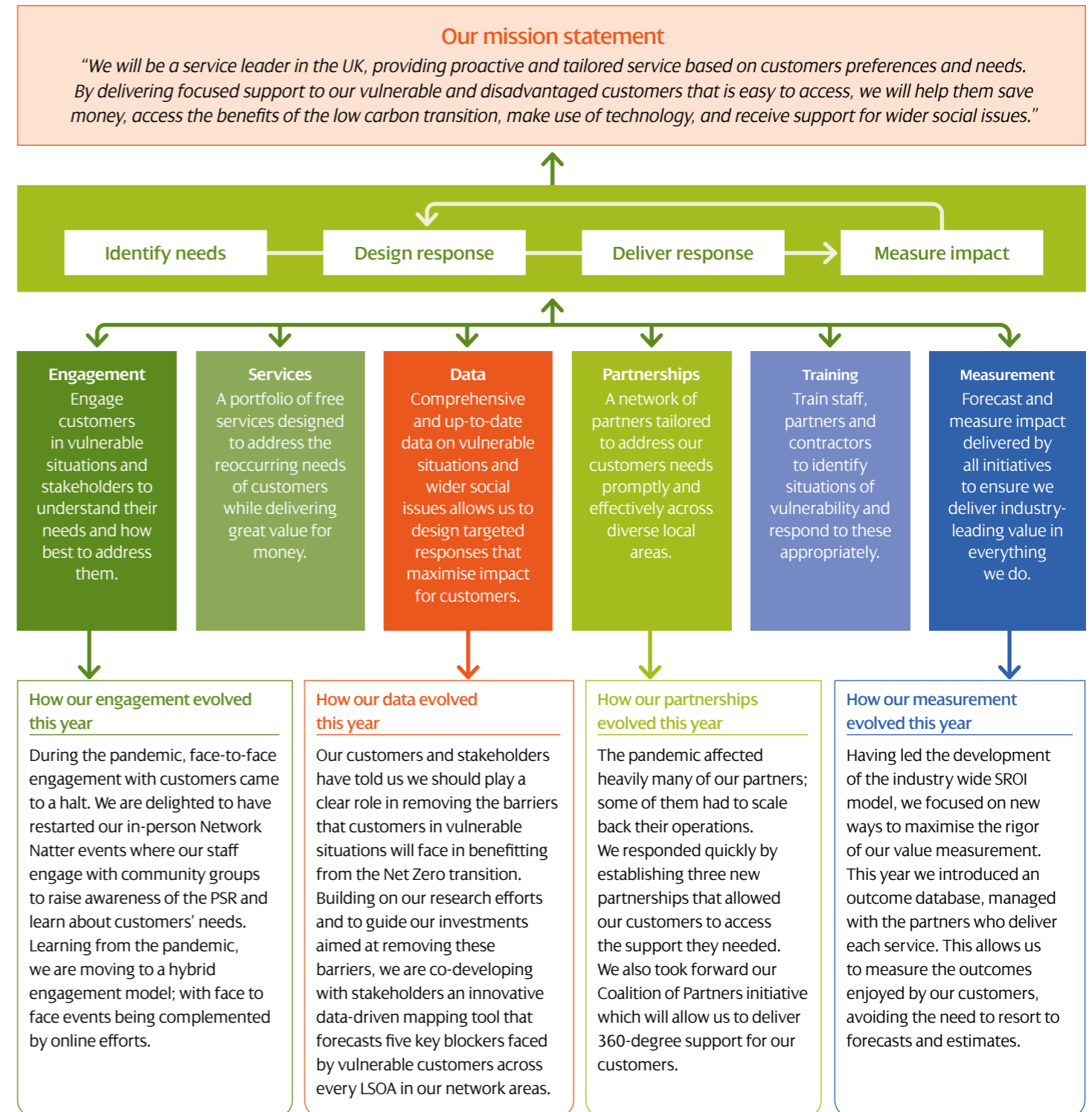
- [Stakeholder events](#)
- [Stakeholder reports](#)
- [Stakeholder registration](#)
- [Join our online community](#)

2021/22 Outputs

Our consumer vulnerability strategy

Our support for customers in situations of vulnerability aims to achieve two key outcomes: *Safeguarding our communities, and Deliver industry-leading value by addressing our customers' core needs.*

These outcomes guide our consumer vulnerability programme and our wider actions as a business are captured by a mission statement defined with customers and stakeholders in 2018, and updated in 2021. The mission statement, along with three key focus areas, and capabilities that support their achievement, make up our strategy.



Consumer vulnerability strategy (continued)

Addressing customers' needs

Ongoing engagement with stakeholders and people in vulnerable situations, complemented by a sophisticated data strategy, have led us to build a comprehensive and accurate picture of our customers' needs. As discussed in the previous section, these needs are complex, diverse and multi-dimensional; addressing them all requires the involvement and support of many bodies and organisations across the private and public sectors. At the same time, as a regulated network, everything we do is funded by our customers so it's essential that our efforts in tackling vulnerability focus on the areas where our customer base and our expert stakeholders believe we can have the most impact. Over the years, we have worked closely with them to define our role in supporting customers in vulnerable situations; for example, we have learned that our customers want to support people in times of hardship but do not believe it's our role to provide direct financial support. Collaboration with customers and stakeholders led us to focus on the three following needs:



While our consumer vulnerability programme is focused on addressing these three core needs, we have taken new steps to ensure that our vulnerable customers can access 360-degree support that truly makes a lasting impact on their wellbeing and their quality of life. Our Coalition of Partners model, gives us the means to directly connect those in need of extra help with tailored support from organisations with the expertise and resources necessary to make a difference. This model complements our portfolio of support, allowing us to focus our efforts where we can be more effective while leaving no stone unturned to support our vulnerable customers. The sections below provide more detail on our ongoing efforts and new projects aimed at addressing our customers' needs.

Our actions/Communicate promptly, clearly and effectively during and before power cut:

- ✓ We continued to ensure that our customers in vulnerable situations remained informed and up-to-date in a variety of scenarios. Communicating effectively and keeping customers involved is critical to lower stress, manage anxiety, and allow customers and those who care for them to put the necessary arrangements in place to protect their welfare and wellbeing.
- ✓ Over the past year, we continued to rely on our comprehensive portfolio of 12 communication services, delivering these to over 3.5million customers. The large volume in the delivery of communication services reflects our relentless customer focus and the unprecedented efforts made in supporting our vulnerable customers throughout a very challenging storm season.
- ✓ From visits to a customers' premises before a planned outage to providing accessible channels for communicating and staying up to date during supply interruptions, these services were designed over the years to ensure that our customers stay abreast of the latest progress and feel in control of their situation.

IVR Messaging 179,041 Customers supported	Inbound fault enquiry 666,740 Customers supported	Text relay service 96 Customers supported
Restoration calls 165,727 Customers supported	SMS Updates 781,093 Customers supported	Dedicated PSR Helpline 15,046 Customers supported
Voice to landline updates 465,909 Customers supported	Website accessibility 290,520 Customers supported	Security of Supplies Leaflet 3.5million Households supported
Planned outage face-to-face visits 31,413 Customers supported	Added security checks 1,789 Customers supported	Braille and Large Print Services 48 Customers supported

Our actions/Support customers' welfare when a power cut occurs:

- ✓ We take all steps necessary to prevent and minimise detriment that our vulnerable customers can experience during a power cut. Our objective is always to provide a tailored response to our customers' unique set of needs and circumstances. We do this by empowering our customer-facing staff with (i) the skills to understand customers' needs and (ii) the flexibility to do what's required to support them fully.
- ✓ At the same time, our experience, engagement and data analysis tells us there are recurring needs we can address with a standardised services to minimise impact to customers during power cuts.

Generator provision 6,668 generator provided	Help in a power cut support 9,565 Customers supported
Winter welfare packs 4,012 Customers supported	Hot food and hotels provided 90,902

Consumer vulnerability strategy (continued)

Outcomes we delivered for power cut support

Delivered a total benefit of £4.2m* over the past year alone	Every pound spent on power cut support, we delivered a benefit of £1.45* to our customers	90% customer satisfaction with the power cut support offered	99.66% of vulnerable customers did not experience a power cut or were restored within 6 hours in 2021/22
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*These results are based on the outcomes enjoyed by customers as a result of 23 services we delivered over the past year to support customers before and during powercuts.

Address Fuel Poverty and provide wider social support

Our actions/Tackling the root causes of fuel poverty and its consequences:

No one should have to choose between heat or eating, but this is unfortunately a situation that many households in fuel poverty face regularly. Fuel poverty is not only a social and economic problem, but it also has wider societal impact such as the negative impacts of cold and damp homes on the wellbeing of its residents among many others. Ongoing events, such as the pandemic and the energy crisis are already exacerbating the issue by pushing more people deeper into fuel poverty. To tackle fuel poverty, we rely on a strategy that addresses its three key components: household income, the cost of energy and the efficiency of the home. This strategy is supported by three key services, shown in the table on the right; we have delivered these to 33,813 customers over the past year.

Responding to the ongoing energy crisis we have also developed new initiatives and partnerships: ✓ While focusing on addressing the root causes of fuel poverty, we also geared up to support our partners' efforts in lending a helping hand to families facing the impending price hike. We partnered with Energy Action Scotland on the Essential Warmth Campaign to deliver duvets and duvet covers to 100 families in the most deprived communities. ✓ We partnered with the Fuel Bank Foundation, along with several other electricity and gas networks, to support a network of community support partners in providing emergency next day fuel funds and the provision of additional support services to address long term debt and poverty. Since the start of this year 309 families were supported.

Energy advice and efficiency measures 33,441 Customers supported
Best energy tariff 241 Customers supported
Income maximisation and debt advice 131 Customers supported

Our actions/Providing support to address wider social needs:

- ✓ As a customer-facing organisation with a strong local footprint, we interact with customers everyday, often at delicate times. Across these touchpoints, we often encounter emergencies and situations of vulnerability, many of which are not related to a customer's energy supply. These include health issues such as dementia and mental health but also social issues such as loneliness.
- ✓ Supported by our customers and stakeholders we have long held the belief that we have a role in identifying and linking expert partners – we are particularly proud of this role.
- ✓ To do so, we have set up a portfolio of nine services designed to give a helping hand to those customers who may need extra support. Over 2021/22, we have delivered these services to 1,541 customers via our wide network of local partners.

Connections assistance 45 Customers supported	Carbon monoxide awareness and alarms issued 300 Customers supported
Safeguarding through fire services – safe and well programmes 634 Customers supported	Befriending, carers support, dementia support, good food and friends and community support 562 Customers supported

Outcomes we delivered to address wider social needs

We delivered a total benefit of £1.3m* over the past year alone	For every pound spent on fuel poverty and wider social support, we delivered a benefit of £6.44* to our customers	97% customer satisfaction with the fuel poverty and wider social support services	5% collaborative initiatives with Utilities organisations
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*These results are based on the outcomes enjoyed by customers as a result of 21 services we delivered over the past year to tackle fuel poverty and address wider social services.

Consumer vulnerability strategy *(continued)*

Ensure no-one is left behind in the energy system transition to Net Zero

Our actions/Leaving no-one behind in the energy system transition:

As a network operator, we play a central role in building the network, processes, systems and functions around which the future energy system will rotate – as such, it's essential that we take steps to make this system accessible and beneficial to all in the transition to Net Zero.

Our efforts to understand the barriers that vulnerable customers face in participating in the transition started in 2019. We commissioned independent research into the industry and socio-economic trends that would impact the dynamics of vulnerability as our communities moved towards Net Zero. Having identified these key trends, we engaged our partners and expert stakeholders to map the barriers (shown on the right) that vulnerable customers would face in adopting low carbon technologies and taking an active role into the future energy system. As we gear up for the next regulatory period, we have made great strides forward in this area over the last year:

- ✓ We are developing a new method to measure and map the risk of being left behind across every local community we serve in England, Wales and Scotland. This method will result in the creation of an interactive map which will shape our efforts in supporting customers throughout this transition.
- ✓ We worked with our stakeholders to co-develop simple, comprehensive guides on 16 new energy technologies and solutions ranging from heat pumps to time of use tariffs and heat networks. These guides have been published on our website and are accessible in printable formats for the accessibility of all groups.
- ✓ We commissioned another independent study to explore the latest thinking on the blockers that vulnerable customers may face in participating in the energy system transition. This report, based on 27 highly reputable sources including BEIS, Citizens Advice, the Energy System Catapult, largely supported the barriers on which our approach is built.
- ✓ We commissioned an independent study to identify the barriers that disabled drivers would face when charging EVs. The study also explores potential solutions that could be implemented to overcome these barriers.

The five barriers faced by our vulnerable customers

- Knowledge
- Financial
- Technical Capability
- Opportunity
- Willingness to take risks

Outcomes delivered in leaving no-one behind

All vulnerable customers can now access simple guides that increase their knowledge while providing a direct route to funding, installation and tailored support.

Measured and mapped the risk of being left behind across every LSOA we serve. This will allow us to shape and target future support.

We delivered a **total benefit of £390,000** over the past year alone

For **every pound spent** on LCT initiatives, we delivered a **benefit of £7.77** to our customers

Our consumer vulnerability programme delivers great value for money



£5,885,107

Total benefit delivered by 46 services and initiatives delivered this year

For every **£1 spent**, we delivered a **total benefit of £1.88** to our customers



£19,477,497

Total benefit delivered by 46 services and initiatives delivered this year

For every **£1 spent**, we delivered a **total benefit of £6.02** to our customers



£32,446,384

Total benefit delivered by 46 services and initiatives delivered this year

For every **£1 spent**, we delivered a **total benefit of £9.72** to our customers

Connecting to our network

We go the extra mile for our customers – far beyond the typical energy business remit – engaging through social media, innovating and preparing for the future.



Stakeholder Engagement Reach

Through our robust and regular engagement programme, such as stakeholder engagement panels and in-depth annual customer surveys, we have been able to ensure that we support the needs, aims and aspirations of our stakeholders.

In 2021/22, we have received excellent feedback on content, level of engagement and events hosted for our connections stakeholders. We are delighted to confirm we have made significant progress on the delivery of our 13 strategic improvement actions. Also, in response to stakeholder feedback from last year asking for enhanced opportunities to get involved, we have increased the number of ways to engage and reach more stakeholders than ever before.

Further detail on our performance in can be found within [our latest ICE plan](#).

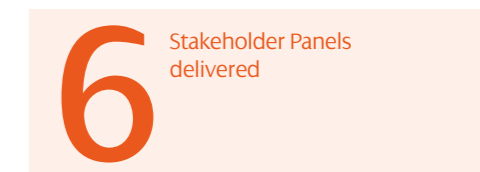
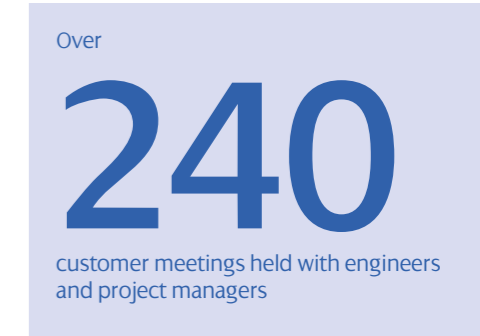


Provision of Quotations

In 2021/22, we received 14,564 enquiries in SPD and 14,056 in SPM. In SPD, 11,135 quotations were issued and in SPM 11,926 were issued.

In SPD, our average time to quote was 3.97 working days for single premises, and 7.35 days for multiple premises. The corresponding average time to connect was 34.24 days and 39.34 days, from accepted and payment.

In SPM, our average time to quote was 4.93 working days for single premises, and 10.09 days for multiple premises. The corresponding average time to connect was 35.68 days and 39.98 days, from accepted and payment.



★ Substantially ahead of 2021/22 target ● On 2021/22 target ● Partially or marginally below 2021/22 target ● Substantially below 2021/22 target

Innovation and future networks

We have challenged ourselves to deliver an ambitious innovation programme and have built a strong portfolio of projects which are impactful and deliver benefits for customers as we move into RIIO ED-2. We have committed to deliver £87m of savings for our customers by embedding successful innovation.

Benefits of innovation projects are being realised and embedded into our business.

We Innovate in Collaboration
Collaboration is essential to enable innovation. We collaborate with other network operators and licensees on our projects, allowing us to share knowledge and increase our ability to steer new developments for the benefit of the industry. We also actively engage with several forums that facilitate these collaborations, in addition to academic and European collaborations. Two of these key forums that SP Energy Networks work with are:

Power Networks Demonstration Centre
 The PNDC aims to accelerate the adoption of innovative research and technologies from early-stage research into business-as-usual adoption by the electricity industry through their close work with academic partners.

The Energy Innovation Centre
 The Centre works with several UK energy networks to improve collaboration with Small and Medium sized Enterprises (SMEs) to accelerate innovation performance to enable the transition to a low carbon economy.

EIC partnership achievements 2021/22:

Signed Projects (vs. target)	6 (5)
Innovation calls and Challenges	5 (3)
Innovation labs	4 (4)



Focus on Customer Vulnerability
 We have developed several projects this year which focus on our vulnerable customers, and we can support them through innovation. The following projects are all managed through the NIA framework:

Security of supply for vulnerable consumers will identify and test technologies which will aid in system and communication restoration and develop a support tool to enable effective decision-making during loss of supply incidents.

Vulnerability in the Energy System Transition will develop a tool to assess the likelihood of customers being left behind in the energy system transition, based on their geographical area. This area-by-area breakdown will allow SP Energy Networks to provide improved advice and support to customers.


The PSR Comms Review project will look to assess the use of a behaviourally informed approach to communication to improve customer engagement with the Priority Services Register, and to understand the differences between consumer groups who may require bespoke approaches according to their needs.


Our NIC Projects: FUSION (£5.9m)
 Our FUSION project is a Distribution System Operator (DSO)-transition project aimed to demonstrate the commoditisation of the demand-side flexibility through a structured and competitive market-based framework, enabling the DNO and other market actors to unlock the value of local network flexibility


The project adheres to the Universal Smart Energy Framework (USEF) principles and is focused to inform how a standardised approach helps DNOs to harness local flexibility to efficiently manage the modern network.


Over the past 12 months FUSION has been successfully operating a live flexibility market in East Fife to alleviate both simulated and real congestion on our network. This represents GB's first USEF compliant flexibility market.

We are continuously thinking big, starting small and scaling fast with our world-leading innovation projects. Our NIC Portfolio covers the major challenges which the power industry is facing, and is delivering solutions to allow us to meet these challenges.


FUSION


LV ENGINE


ANGLE-DC


CHARGE

Innovation and future networks (continued)

We are now preparing for the start of RIIO-ED2 and the new innovation challenges to ensure that we have a positive impact on our customers and can enable the transition to the new energy system.

Our NIC Projects: LV Engine (£8.2m)
 Our LV Engine project aims to trial globally innovative Smart Transformers (STs), uses power electronics, to facilitate the connection of low carbon technologies by enhancing flexibility of LV networks and offering LVDC supply. Over the last 12 months we have built a number of ST prototypes which are now under various factory tests to ensure compliance with UK DNO standards. We plan to further test the ST performance and our LVDC protection strategy in a controlled laboratory environment before installation and commissioning in real distribution network which is currently scheduled in Q1 2023. We have also progressed further in preparation of our LVDC trial site where ST will be deployed to supply an ultra-rapid DC-fed EV charger, this demonstration is the first of its kind in the UK if not world. LV Engine is planned to be completed by December 2024.

Our NIC Projects: Angle DC (£15m)
 ANGLE DC is an innovative project which converts two existing 33kV AC distribution circuits to operate as DC circuits between Llanfair PG substation, on Anglesey, and the Bangor 33kV substation, on the North Wales mainland. At each end of the circuit, an AC – DC Voltage Source Converter (VSC) station has been installed. This will provide independent reactive and real power control capability on and between both AC networks, which will improve the voltage profile in the local region and reduce the operating losses in the networks through real power control. This has never been done at the Medium Voltage level.

The VSC stations are a novel application of drive technology on the distribution network. Commissioning has taken place within the last 12 months, with successful real power transfer between the two converter stations. Electrical losses will be reduced by controlling power through the DC link. This results in better utilisation of the AC circuits on Anglesey and North Wales. Because the AC cables and overhead lines are better utilised, AC circuit reinforcement can be deferred for many years into the future. The feeder load balancing also frees up capacity for Distributed Energy Resource (DER). Angle-DC can enable up to 60% extra DER capacity onto the distribution network.

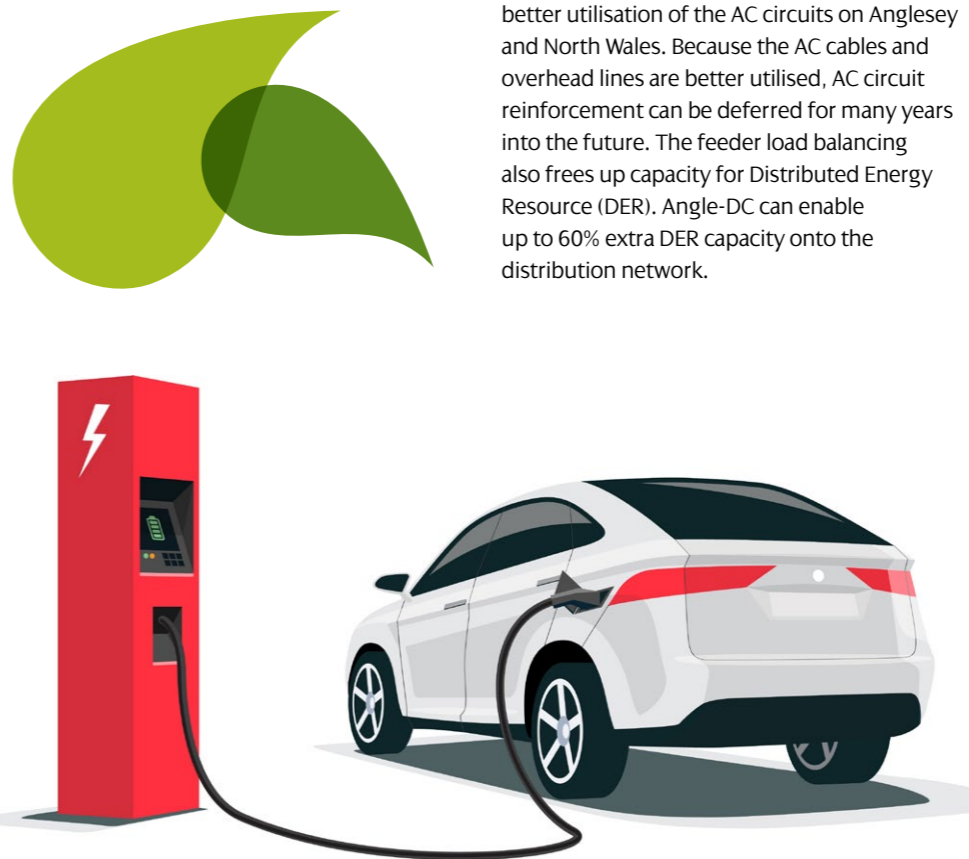
Our NIC Projects: CHARGE (£8.4m)
 The aim of Charge is to accelerate the deployment of public charging for Electric Vehicles, EVs through 3 linked Methods:

Method 1 involved the production of a transport model, the first of its kind by a DNO. This model highlights the likely demand for public charge points from 2020 to 2050 based on travel patterns of EV vehicles and EV uptake.

Method 2 concerns the role and applications of "Smart Charging Connections" on the electricity network. Several sites have been selected within our DNO area to understand available capacity at these locations. This may provide connection customers with greater flexibility in the types of connections that can be offered and will shape our design philosophies for the future.

Method 3 is to provide public charge points customers with a self-service tool called ConnectMore. The 1st Phase of this was to give them an online Map view of the transport model data, these high granularity capacity maps gave them sight of the spare capacity on the LV and HV networks down to LV feeder level. Now with ConnectMore phase 2, released in august 2022, our customers (in SPEN Manweb) can generate a numerous connection budget quotes to choose the network section that best suits their needs, both in terms of the cost to connect and the projected future EV Charger demand.

Using that information, they can go for a conventional connection or Smart Charging Connection.



Further background

- [NIA Distribution Annual Report 2021](#)
- [Innovation strategy](#)

Environment

We have a key role in enabling greater adoption of low carbon technologies (LCTs), such as Electric Vehicles and micro-generation. We are also focussing on reducing the environmental impacts of our own operations.

In this 2021/22 Distribution report we provide an overview of our environmental performance against our ED1 Commitments and give examples of the specific initiatives driving progress as part of our longer term strategic plan.

Our own carbon footprint

Since the start of ED1, we have achieved a 56% reduction in our combined (SPD & SPM) carbon footprint, excluding losses, since setting a 15% reduction by 2023 target in 2013/14. The Business Carbon Footprint graph shows our progress through ED1. This represents a 15% reduction in SPM and a 76% reduction in SPD.

In comparison to 2020/21, our carbon footprint (excl. losses) has increased by 31% in SPM and reduced by 23% in SPD. This is now our second full year of reporting after our move to a REGO tariff in September 2019, which provides us with guaranteed zero emission electricity. As a result, our buildings and substation energy use now makes up only 1.5% of our total carbon footprint excluding losses, compared to 64% in 2013/14. Since 2020/21, our operational

vehicle carbon has decreased by 7% in SPM and increased by 2% in SPD. Our emissions related to business travel have increased by 27% across Distribution, mainly due to the easing of Covid-19 restrictions. In SPM our SF₆ (Sulphur hexafluoride) emissions have increased by 28% (from 1,584 tCO₂e to 2,027 tCO₂e and in SPD have increased by 70% (from 1,138 tCO₂e to 1,930 tCO₂e). This is due to improvements made to our data on asset disposals as we now include the emissions from all disposed assets unless we have evidence of SF₆ recovery from our scrap contractors.

Utilise Smart Meter technology to ensure all generation sources are supported quickly

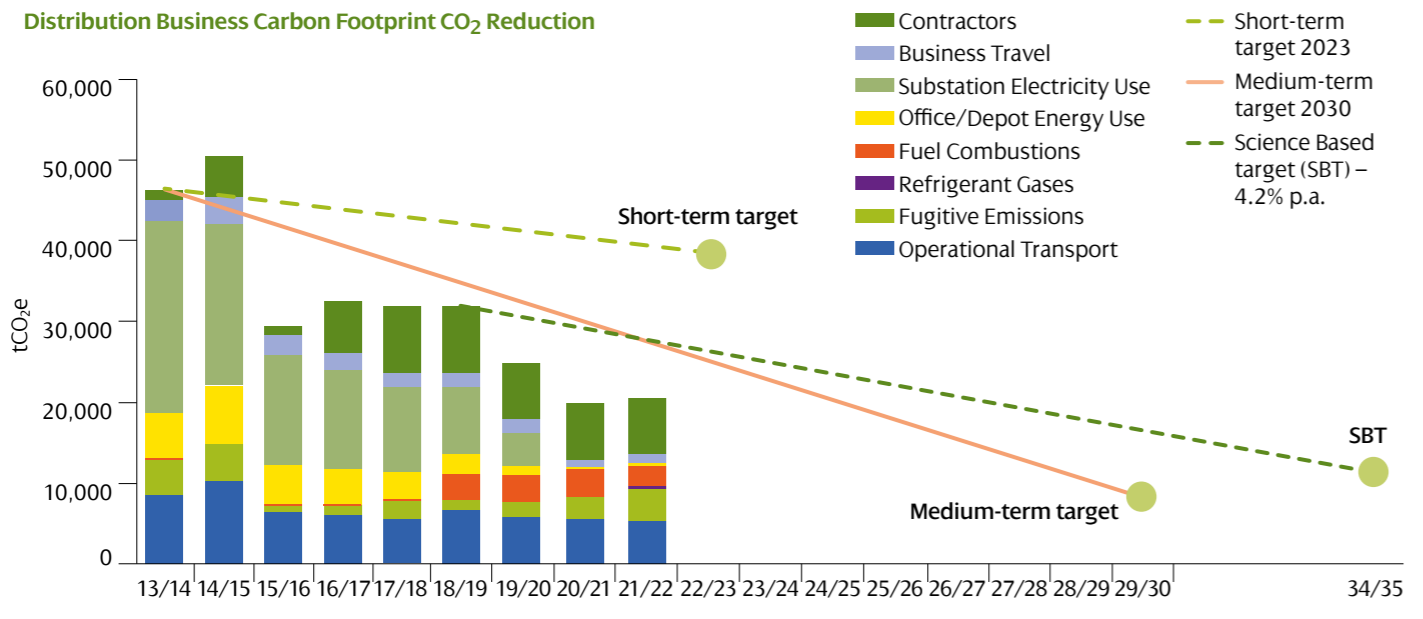
During 2021/22, our systems were enhanced to be compatible with older SMETS1 devices, where previously we could only communicate with SMETS2 meters. However, SMETS1 devices must be enrolled into the UK's Smart DCC infrastructure to ensure we can connect, and the enrolment process is controlled by Electricity Suppliers. By the end of the year, we were able to communicate with 246k SMETS1s in SP Distribution area, and another 241k in SP Manweb. As a consequence, we were able to retrieve data from 1.1 million smart meters by

the end of the year, almost one-third of our customer base.

In the 2021/22 year, SP Energy Networks also implemented further refinement to our Smart Metering IT application, introducing new functionality and system enhancements. Further improvement is planned for 2022/23, including the opportunity to quickly identify the location of a fault.



Distribution Business Carbon Footprint CO₂ Reduction



★ Substantially ahead of 2021/22 target
 ● On 2021/22 target
 ● Partially or marginally below 2021/22 target
 ● Substantially below 2021/22 target

Environment (continued)

Visual amenity in Areas of Outstanding Natural Beauty (AONB), National Scenic Areas (NSA) and National Parks

We continue to target measures to reduce the visual impact of our network by removing overhead lines from Areas of Outstanding Natural Beauty (AONB). This year we removed a further 10.11km of overhead line and installed 8.78km of underground cable in AONB. The two pictures below show before and after 0.31km of overhead lines were removed in Bodorgan Estate Gardens, situated in the Ynys Mon/Anglesey AONB.



Bodorgan Estate Gardens before OHL removed



Bodorgan Estate Gardens after OHL removed

Increasing the use of electric vehicles and charging points

In September 2019, our parent company Iberdrola signed up to The Climate Group's EV100 initiative. The agreement will see Iberdrola electrify their vehicle fleet (subject to local market conditions) by 2030. Since then, SP Energy Networks has been at the forefront of this initiative, focusing our efforts on ensuring we have optimal vehicle charging facilities whilst procuring the most effective electric vehicles to become an essential part of our operational activities.

Reduce oil leaks by 50% through the replacement of poorly performing 132kV cable in SPM

At the start of ED1 we set ourselves a target to reduce leakage in our SPM 132kV fluid filled cables. Since reporting year 2015/16 we have achieved an 84% reduction in fluid filled cable top ups in SPM.

In SPM we have 159 km of fluid filled cables and topped up a total of 2195 litres in the 2021/22 reporting year with a leakage rate of 0.3%.

In SPD we have 29km of fluid filled cables and topped up 74 litres in the 2021/22 reporting year with a leakage rate of 0.09%.



★ Substantially ahead of 2021/22 target
 ● On 2021/22 target
 ● Partially or marginally below 2021/22 target
 ● Substantially below 2021/22 target

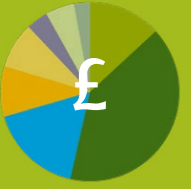


Further background

- www.spenergynetworks.co.uk/pages/stakeholder_reports.aspx
- www.spenergynetworks.co.uk/pages/what_are_we_doing_about_network_losses.aspx

Expenditure and revenues

'RIIO' is Ofgem's framework for setting price controls for network companies. RIIO stands for Revenue = Incentives + Innovation + Outputs. Effectively, this means that we are only rewarded for delivering exceptional performance in our incentive, outputs and innovation.



Our financial performance

The key facts about revenues and expenditure this year:

Our allowed revenues

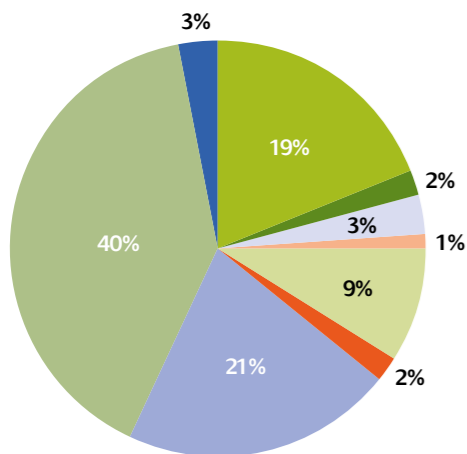
The amounts we are permitted to recover from our customers for using our network services during 2021/22. In total, and what it implies for our Unrestricted Domestic Tariff Charge:

	SPD (£m)	SPM (£m)
Total Allowed Revenue	429.5	378.8
	SPD (£)	SPM (£)
Unrestricted Domestic Tariff charge	79.17	96.96

Our expenditure on our network (2012/13 prices)

A breakdown of how we are using our revenues to strengthen and extend our networks:

	SPD (£m)	SPM (£m)
Engineering and support Activities	79.3	79.3
Asset Replacement and Refurbishment	34.7	43.1
Network operating costs	39.7	44.1
Rising lateral mains	4.1	2.3
ESQCR low ground clearances	3.8	9.9
General reinforcement	17.1	20.0
Non-operational capex	4.0	4.1
Connections	2.4	2.6
Others	6.7	4.7
Total (£m)	191.9	210.1



Total Expenditure across SPEN (SPD and SPM)

- Asset Replacement and Refurbishment 19%
- Rising Lateral Mains 2%
- ESQCR (Low Ground Clearances) 3%
- Connections 1%
- General Reinforcement 9%
- Non-operational Capex 2%
- Network Operating Costs 21%
- Engineering & Corporate Support Activities 40%
- Other 3%

Our financial performance (continued)

The key facts about our performance this year under the various financial incentives that all DNOs are subject to.

In 2021/22, we earned a £18.8m reward for going above and beyond delivering a safe, secure and reliable service to our customers and meeting our stakeholders' needs (2012/13 prices).

Performance-related financial incentives

How our performance this year translates to rewards or penalties under the various financial incentive mechanisms put in place by the regulator, Ofgem, and applied to all DNOs.

	SPD (£m)	SPM (£m)
Reward or penalty schemes		
Interruptions incentive	+9.4	+2.6
Customer satisfaction	+3.0	+3.0
Penalty-only schemes		
Incentive on Connections engagement	0	0
Reward-only schemes		
Stakeholder engagement incentive	TBC	TBC
Customer vulnerability incentive		
Time-to-connect incentive	+0.5	+0.3
	+12.9	+5.8
Total licensees combined (£m)		+18.8



Interruptions incentive example: Maintaining our network and being well prepared for severe weather events.



Stakeholder engagement and consumer vulnerability incentive example: Tackling wider social issues such as loneliness, social isolation, depression, anxiety and independence.

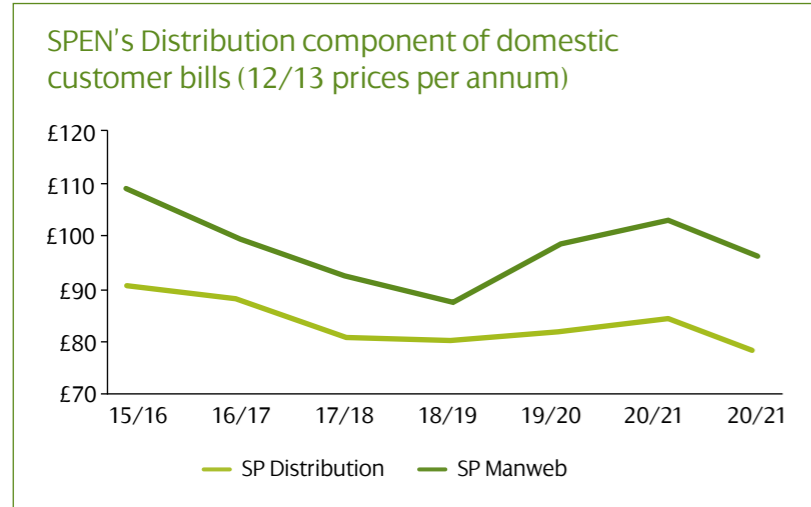
Further background

- **Interruptions Incentive** (See pages 33-35 of Ofgem's ED1 Strategy Decision)
- **Customer Satisfaction** (See pages 62-64 of Ofgem's ED1 Strategy Decision)
- **Incentive on Connections Engagement** (See pages 81-82 of Ofgem's ED1 Strategy Decision)
- **Stakeholder Engagement Incentive and Consumer Vulnerability Incentive** (See Ofgem's Stakeholder Engagement and Consumer Vulnerability Incentive Guidance)
- **Time to Connect Incentive** (See page 81 of Ofgem's ED1 Strategy Decision – Outputs, incentives and innovation annex)

Bill impact

The key facts about the make-up of distribution network costs which represent your annual domestic electricity bill in 2021/22.

SPEN's Distribution component of domestic customer bills has fallen by 6% in real terms since the start of the current price control.

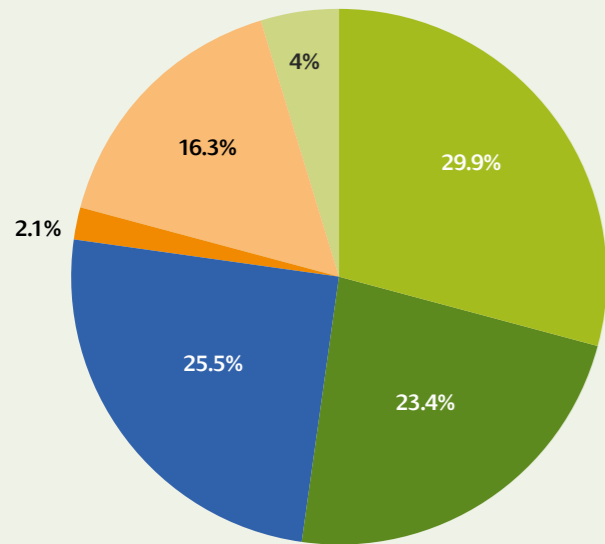


30p per day

SPEN's Distribution component of domestic customer bills is around 30p per day – less expensive than a Netflix subscription and a second class stamp. Average customer bills have also fallen by 12.1% in real terms since the start of the current price control.

Breakdown of an average electricity bill 2021/22

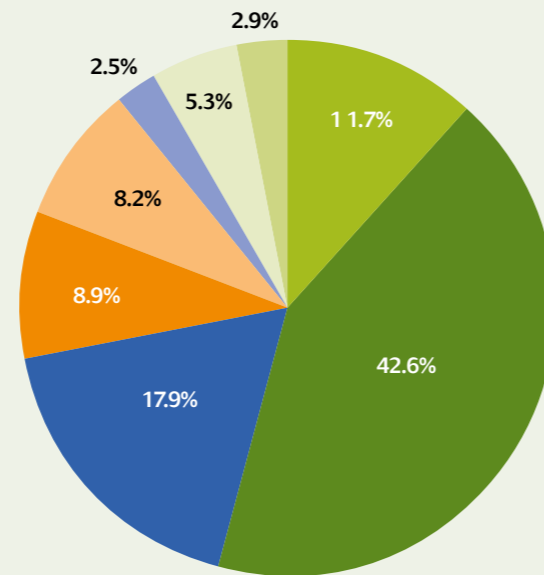
Electricity bill make up



Wholesale costs	29.9%
Network costs (includes Transmission Costs)	23.4%
Environmental and social obligations	25.5%
Other direct costs	2.1%
Operating costs	16.3%
Supplier pre-tax margin	-1.3%
VAT	4%

Further Split: 2021/22 Distribution Costs included in 23% opposite

Distribution component of electricity bill (SPD and SPM Combined 2021/22)



Cost of maintaining the network	11.7%
Future proofing our network	42.6%
Financing	17.9%
Business Rates	8.9%
Legacy Pensions	8.2%
Regulatory Incentives	2.5%
Transmission Charges	5.3%
Other	2.9%

Looking forward



Distribution System Operator (DSO)

To meet the challenges of a Net Zero future fundamental changes will be required to the way we operate and design our networks.

The energy landscape is changing fast as the way our customers generate, use, and interact with energy evolves. This means that our role – how we plan, design, and operate the network for our customers – also needs to. This includes additional roles and activities. Most of these roles and activities are evolutions of existing business-as-usual activities, whilst others are new. These will, in turn, require new enabling infrastructure and business processes that we have started to deliver ahead of RIIO-ED2. At SP Energy Networks, DSO is the set of roles, activities, and infrastructure that we plan to deliver, so that we can unlock the capacity of the network and enable Net Zero efficiently for our customers and communities.

Our RIIO-ED2 Distribution System Operation (DSO) strategy details how we will respond to system challenges, so that we can enable decarbonisation targets while continuing to deliver exceptional service to our customers and communities. We will invest £186m in RIIO-ED2 to deliver £370m in direct customer benefits over the next 45 years and £0.5bn-1.6bn in wider system benefits by 2040.

This section of the annual report will highlight some of the key DSO activities that have taken place from 2021 to 2022, with a look ahead to our preparation for RIIO-ED2.



Active Network Management (ANM)

We are in the process of deploying wide scale active network management (ANM) across the Dumfries and Galloway network area. This regulates the output of Distributed Generation (DG) to manage transmission and distribution constraints – this type of coordination across transmission and distribution is a UK first. The scale and nature of this project (one of the largest of its type) provides invaluable learning for further developing constraint management zones (CMZs) in RIIO-ED2.

In November 2021 a report on our Active Network Management (ANM) project trial in Dunbar was published by non-profit energy experts, Regen. It highlighted the job creation, stimulated economic growth, and community benefit from the connection of more renewables that this project facilitated – highlighting the critical role that ANM has to play in supporting our communities as well as a more dynamic network.

During the last 12 months, we successfully installed and commissioned the SP Distribution Centralised Active Network Management Operating Platform (CANMOP), this will facilitate the ongoing role out of Dumfries and Galloway CMZs. Looking ahead we have been working towards the installation of the first SP Manweb CANMOP. This installation will facilitate the deployment of CMZs in the North Wales area of the SP Manweb network, enabling faster and lower cost connection of distributed generation and new sources of demand.



Distribution System Operator (DSO) (continued)

Distributed Restart

SPEN are leading a cross-licence project to successfully trial re-energising the electricity network by using pioneering technology to tap into renewable energy from wind turbines and hydro generation in the highly unlikely event of a full or partial blackout. The capability to restart the power grid in the event of a partial or total shutdown of the national transmission network has previously been provided by large transmission-connected fossil fuel power stations.

The innovation funded Distributed ReStart project – which is a partnership between SP Energy Networks, National Grid ESO and specialist energy consultancy TNEI – is exploring the use of Distributed Energy Sources (DERs) such as solar, wind or hydro, to kickstart the energy system. We conducted a trial in Galloway as part of the second phase of this world-leading project to show how the range of smaller distribution connected energy sources could be used to restore power during an electricity system restoration event.

This trial utilised a hydro-generator in Kendoon and power wind turbines across two small wind farms at Glenchamber and North Rhins to re-energise the network in an isolated test. The ground-breaking trial paves the way for a radically different approach to system restoration, using renewables to help to reduce costs and drive society forward towards Net Zero emissions targets. If this project is successful, Our ANM and CMZ schemes have the potential to utilise Distributed Energy Resources (DER) connected to the DNO network to support DSO-led widescale electricity system restoration.

Electric Vehicles (EVs)

There is now certainty that the rate of uptake and ultimate number of EVs will have a major impact on electricity networks in the future. This will be a function of the rate of uptake; charging technology; customer charging behaviour and the level of electric vehicles (EV) charging management that can be implemented. Combined with the UK and Scottish Government’s target to prohibit the sale of new carbon emitting cars by 2030, with the current car market demonstrating the overall cost of EVs vs traditional Internal Combustion Engine (ICE) vehicles is closely aligned, we expect mass uptake of EV in the next decade with over 1m in our licence areas, as set out in our latest Distribution Future Energy Scenarios.

To enable the wide-scale roll out of EVs, it is key that UK electricity networks can facilitate suitable charging infrastructure for customers at a reasonable cost. We anticipate in the RIIO-ED2 price control period (2023-2028) that we need to invest £444m of load

related expenditure across our electricity network areas, much of which is to cope with the increased demand from the electrification of transport. We have been working closely with local, regional and devolved government, to accelerate the uptake of EV charging infrastructure in our areas and to help meet legislated and interim Net Zero targets.

PACE is our joint-funded project between SPEN and the Scottish Government, it has been focused on providing innovative ways to deliver EV charging infrastructure and is helping us understand how to integrate charging infrastructure in a way that not only reduces pressure on the network, but also benefits consumers. The project determined the 44 most suitable EV charging hubs across North and South Lanarkshire, which were delivered by SP Energy Networks using Transport Scotland grant funding. This approach has delivered a total saving of £1.5m – £2.8m in connections costs across the 44 EV charging hubs. Scaling up this site selection activity to the whole of Scotland would cost ca. £7.5m and could save more than £26m in estimated connections costs. Carrying out this site selection activity across the whole of the UK would cost ca. £94m and could save more than £310m in estimated connections costs.

In 2021, our innovative EV-Up project, utilised sociodemographic data to better understand where we are likely to experience high EV uptake. This allows us to better plan where we need to invest in our low voltage networks to support the rollout of EVs. Welsh Government have targeted 2028 for all public transport, including buses, taxis and private hire vehicles to transition to zero carbon, and we have been working closely with North Wales and Mid Wales Regional Planning and Economic Growth Boards to help facilitate the transition to electrification for smaller vehicles, and Hydrogen for buses. We have completed detailed analysis of capacity currently available for EV charging for the five Local Authorities in North & Mid Wales leading the transition to EV, specifically targeting areas highlighted for economic growth through tourism and improvement of North-South transport links.

This year, we launched our ConnectMore tool to help our customers access budget-cost estimates for prospective EV chargepoint connections at LV and HV (for both domestic and commercial customers). This cost estimator provides up-to-date price estimations and enables users to consider flexible connections where applicable. This is presented through a user-friendly, web-based tool and allows users to access information quickly and easily. This aims to accelerate the roll-out of charging infrastructure and ensure that EV drivers can charge in their communities and homes.

Distribution System Operator (DSO) *(continued)*

Heat

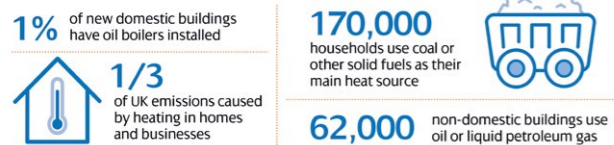
To battle climate change we need to drastically reduce greenhouse gas (GHG) emissions to Net Zero. The UK and Scottish governments have set Net Zero targets of 2050 and 2045 respectively to do this. These headline targets are accompanied by legally binding interim targets of 68% and 75% reduction by 2035, supported by a range of plans and strategies.

This level of attention for buildings is warranted as they account for 23% of the UK's direct and indirect GHG emissions combined. Decarbonising the buildings sector is therefore essential for meeting Net Zero targets. Over 80% of the energy use in buildings is for heating and almost two-thirds of the energy demand of buildings is currently met by natural gas, oil, and coal. Decarbonising buildings therefore means replacing heating based on these fossil fuels with systems based on low-carbon and ultimately zero-carbon alternatives.

Multiple options for the decarbonisation of heat exist, but it is expected that the majority of low and zero-carbon heating by 2030 will be via electric systems such as heat pumps. Our Distribution Future Energy Scenarios Baseline Scenario forecast shows that the number of installed heat pumps (both pure electric heat pumps and hybrid heat pumps) will increase from less than 1,000 now to at least 370,000 by 2028.

As a DNO, we are a force for good in the fight against climate change, and act as a dynamic, and collaborative partner in the transition to sustainable heat to ensure it happens in a fair and just way. We have developed a [heat strategy for RIIO-ED2](#), and continue to utilise and develop our heat forecast tools. We are also part of the Network Headroom, Engineering Upgrades and Public Acceptability (NEUPA) project that is assessing a range of different heat decarbonisation options for consumers and citizens.

Did you know?



Whole System

During the last year, we have been focused on delivering a number of Whole System activities, including the development of our RIIO-ED2 Whole Systems Strategy and the development and upkeep of the Whole System Register. We have also continued to engage with various stakeholders and organisations to develop our understanding of how Whole System thinking can provide real societal benefit and outcomes. SP Energy Networks, as a principal sponsor and contributor, also led in the success of the largest Whole System event of the last year, COP 26 in Glasgow. We are engaged with the Energy Systems Catapult, who will act as both an objective assessor of our Whole System approach and challenge us on our thinking and implementation of the plans detailed in our RIIO-ED2 Business Plan.

Our ambitious RIIO-ED2 Business Plan keeps our customers at the heart of our decision making, and we believe strikes a fair balance between the investment costs required and the need for a Just Transition to Net Zero. Our mission is to unlock the full value of Whole System by collaborating not only with other electricity distribution and transmission companies, but also gas and water networks, innovators, network users, non-regulated companies, local areas, communities, and customers. This will help ensure efficient and necessary investment in the electricity network and other energy system infrastructure to achieve a just transition to Net Zero.



Distribution System Operator (DSO) *(continued)*

The UK's Network Operators have a significant part to play in meeting Government carbon reduction targets. Our ultimate aim is to empower our cities and communities to achieve the economic and health ambitions which can be realised from a low carbon economy.

Flexibility

Flexibility is about co-ordinating the capacity of the network with customers varying electricity demand and generation activities over time to maximise system utilisation. The electricity network has conventionally been designed to accommodate the peak output or consumption of all connected customers, with flexibility we can contract with our customers to adjust their demand and generation profiles to operate safely within network limits. This means we can avoid or defer costly network upgrades and reinforcements with lower cost customer actions, unlocking the capacity of the grid and enabling Net Zero in the most efficient way.

Flexibility from our customers will not only keep the short-term costs of upgrading the electricity network down, but will be key to facilitating the pace of change required to support the low carbon transition as we will not be able to build new assets in time to meet the growing demands of EVs and heat pumps. By agreeing to turn demand or generation up or down at specific times customers can support our network and be reimbursed for doing so. We believe that we are at the forefront of promoting and developing flexibility, and we seek to use flexibility where it is the best value solution for current and future consumers. To do so, it is essential to understand the true value of flexibility, and to be open and transparent about how that value is calculated.

In Spring 2021 we published our largest Flexibility tender yet, for 1.4GW of flexibility services, including a request for reactive-power services, covering the RIIO-ED2 period (2023-2028). We received a strong response to this tender and were able to accept bids for 555MW across SPD and SPM, we are now in the process of awarding these contracts. Site specific pricing signals were provided for each EHV and HV location based on the reinforcement counter-factual cost and for LV locations a single pricing signal was provided to guide providers when formulating their bids.

We launched our Autumn tender in October 2021 with a further requirement of 110MW across SPD and SPM. We had a much smaller response to this tender and only received 200kW worth of bids. As a result, we took the decision to pause running competitive tenders in 2022 and have commissioned an independent report led by Oxera to investigate why we experienced this lower response and identify if there are barriers to market that can be addressed. We plan to recommence tendering in April 2023.

Flexibility Demand Shift Trial

We have successfully led the UK's first trial to shift low voltage electricity demand to maximise local network capabilities using aggregated customer flexibility. Working with Octopus Energy, customers were able to respond and shift when they used electricity to time slots when the supply of renewable energy was at its highest to help balance the demand of the network in their local community.

The Flexibility Demand Shift Trial builds on our role at the forefront of the flexibility market, which allows for more agile network management by encouraging customers to operate in ways that benefit the network. The increased uptake of low carbon technologies like electric vehicles and battery storage can result in network constraints during busy periods, as well as excess generation at other times. Customers operating flexibly provides a smarter way to help address these challenges.

This particular trial, which took place in Dumfries & Galloway and Ayrshire, tested flexibility for managing network thermal capacity, with the trial demonstrating that aggregated flexibility at this level is possible and can provide a response. The process involved us notifying Octopus Energy of time periods where high generation output was forecasted, Octopus then informed participating customers the day before with a request and incentive to increase their electricity consumption during those time periods.

The trial demonstrated how simple it was for customers to participate in flexibility markets, which are often seen as complex, and how responsive participants were, with 98% of the trial participants finding the experience beneficial and participation straightforward tendering in April 2023.



Smart meters

Smart Meters – By 2024, energy companies will have offered 50 million customers a smart gas and electricity meter.

Although the installation of smart meters is carried out by energy supply companies, DNOs have an important role to play.

Smart Meter Systems and data

Electricity Suppliers have been installing smart meters for several years. Initially, these were first generation SMETS1 devices, which at the time only the installing Supplier could communicate with. SP Energy Networks, as a Network Operator, could not connect to SMETS1 meters. In addition, when the customer changed supplier, the new supplier could not connect to the meter, meaning it instantly became non-smart.

The next generation SMETS2 meters were first installed in 2017, and Network Operators could communicate with these through the UK smart infrastructure, managed by the Data & Communications Company (Smart DCC).

Smart DCC's systems were then developed to allow communication with the SMETS1 devices. Following initial pilots, the "enrolment to DCC services" gathered momentum in 2020, and we were finally able to connect to SMETS1s from May 2021. The enrolment programme is driven by suppliers and remains ongoing, expected to continue until at least the end of 2022.

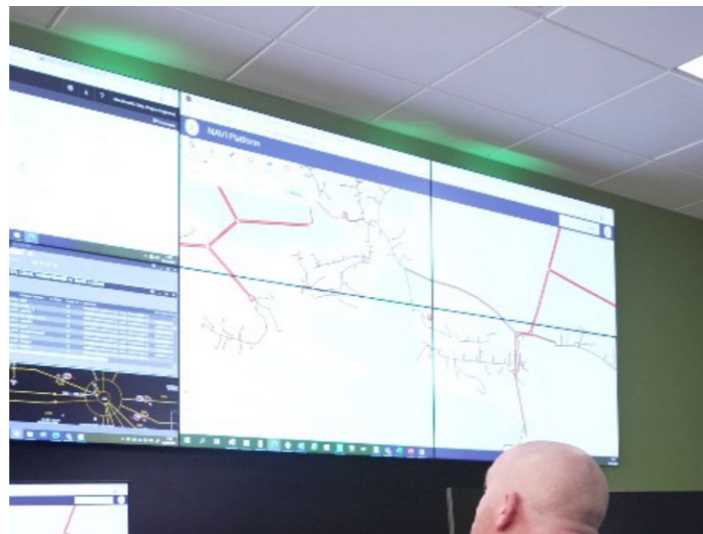
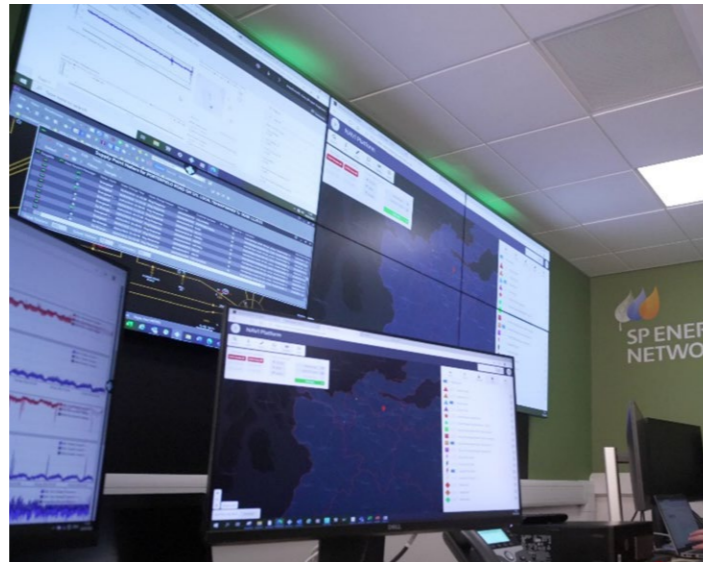
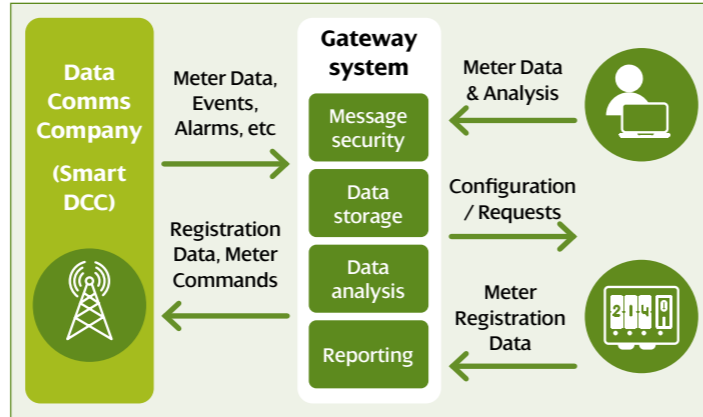
By the end of the 2021/22 regulatory year, we could connect to and retrieve data from approximately 1.1m smart meters (SMETS1s and SMETS2s), approximately 31% of our connected customers.

As the SMETS1 enrolment progresses, and as SMETS2 installations continue daily, we will be able to connect to an increasing number of smart meters. Our Smart Meter Systems team focus on using the data to give more detailed information about the status of our network. This will better inform the design and management of the network as we respond to the uptake of low carbon technologies. It will also help us identify power outages, and consequently improve our service to customers.

We again identified benefits from smart meters in 2021/22, increasing in line with the volumes of communicative smart meters. Benefits include using remote connectivity to identify where our power supply is on when a customer reports loss of supply, preventing an unnecessary visit.

In moving into 2022/23, we have opened a pioneering new LV (Low Voltage) Support Room so innovative it can spot potential faults on the electricity network before they happen. Smart meter data indicates where a potential fault may occur on the electricity network, helping engineers find exact locations where repairs are required, sometimes before customers are even aware of an issue. The costs of resolving such instances are lower than those of a fault, and customers time off supply is lower.

The smart meter roll-out is scheduled to conclude by 2025.



Smart meters (continued)

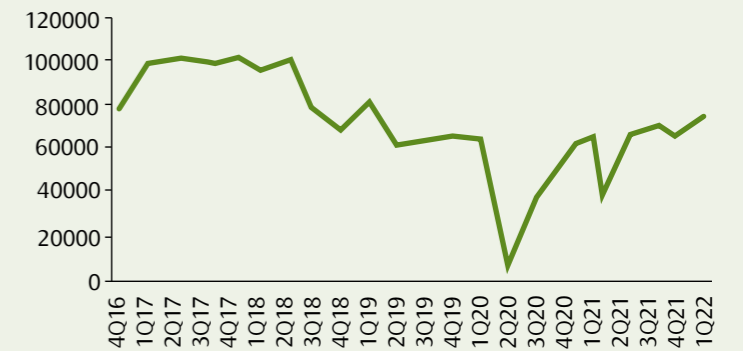
Championing a better customer experience

In a number of our customers' properties, we are required to upgrade our assets to enable the fitting of a Smart Meter (or a conventional meter) or to respond to an emergency situation.

This activity is known as an "intervention". This year we have completed just over 17,000 interventions enabling the roll out of the Smart Metering Programme. This is more than double that of previous years, and reflects the post-Covid journey of the meter installers (see below). The volumes of both Smart Meter installations and interventions have now steadied and are similar to previous years.



Smart Meter Installs



Interventions



How you can get involved

Stakeholder engagement workshops

If you are interested in our services and projects, if our work has the potential to impact you, or if you have an influence over the work we do, then you are a stakeholder. We want to know your views on our plans, so that we can deliver the best service possible.

We already work with a wide range of stakeholders, including domestic customers, local authorities, charities, other utilities, people wishing to connect to our network, school pupils, vulnerable customers and innovators amongst others.

Registering as a stakeholder is easy and enables you to have your say on our projects and services. Please register here: www.spenergynetworks.co.uk/register



General enquiries

Please call us free on: 0330 1010 444
Email: customercare@spenergynetworks.com

Central and Southern Scotland Customer Service SP Energy Networks SP House 320 St Vincent Street Glasgow G2 5AD	Cheshire, Merseyside, N. Wales and N. Shropshire Customer Service SP Energy Networks PO Box 168 Prenton CH26 9AY
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To report a power cut or damage to electricity power lines or substations, call the new national Freephone number – 105.



You can still reach us on our existing numbers:

Central and Southern Scotland 0800 092 9290	Cheshire, Merseyside, N. Wales and N. Shropshire 0800 001 5400
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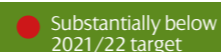
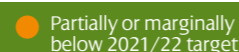
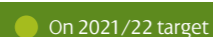
Appendix A

Our business plan commitments in full

Reliability and availability

We are committed to improving the reliability of supply to our customers. Strong stewardship of our assets is achieved through knowing the health and criticality of our equipment in order to target our investment appropriately.

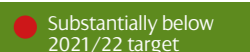
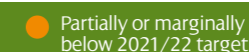
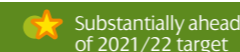
Commitment	SPD this year	SPM this year
● Reduce by 100% the number of customers experiencing a power cut greater than 12 hours by 2023.	An increase of 160% against the baseline due to 4 SWEE's (Severe Weather Exceptional Event).	An increase of 175% against the baseline due to 4 SWEE's (Severe Weather Exceptional Event).
★ Reduce the average number of times our customers lose their power supply by 7%. Reduce the length of time those customers are without power by 16%. By doing this reduce the average time our customers are off supply by 25%.	Interruptions down by 28% and average duration remains at 17%. Well on track.	Interruptions down by 9% and average duration down by 6%. Well on track.
● Improve service to 40% of our poorly served customers.	Storms Arwen, Barra, Malik/Corrie, Franklin has caused performance to slip.	Storm Arwen, Barra, Eunice, and Franklin has caused performance to slip.
★ Mitigate pluvial flood risk at 28 high risk grid and primary substations.	Action completed in 2015 – continuing to monitor and mitigate against new risks.	Action completed in 2015 – continuing to monitor and mitigate against new risks.
● Ensure all rural customers benefit from resilient to severe weather events network by 2034.	Incorporated into investment/modernisation plans, on track to deliver.	Incorporated into investment/modernisation plans, on track to deliver.
● 25% of rural high voltage network and a further 16% of low voltage resilient to severe weather by 2023.	Incorporated into investment/modernisation plans, on track to deliver.	Incorporated into investment/modernisation plans, on track to deliver.
● Deliver a guaranteed standard to reconnect our customers within 36 hours after storm events.	11,530 customers were off supply greater than 36 hours. As a result of Storms Arwen, Barra, Malik/Corrie, Eunice and Franklin.	7067 customers were off supply greater than 36 hours. As a result of Storms Arwen, Barra, Malik/Corrie, Eunice and Franklin.
● Accelerate Fluvial Flood protection plans to complete by March 2015.	Action completed in 2015 – continuing to monitor and mitigate against new risks.	Action completed in 2015 – continuing to monitor and mitigate against new risks.
★ Increase substation resilience to 72 hours.	Action completed in 2015 – continuing to monitor and mitigate against new risks.	Action completed in 2015 – continuing to monitor and mitigate against new risks.



Customer satisfaction

We engage regularly with our customers to understand what they want from us and act on feedback to improve our service. We have made consistent sustained improvement which has made a significant impact on customers experience.

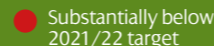
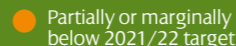
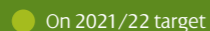
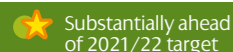
Commitment	SPD this year	SPM this year
● Answer calls in less than 10 seconds and never force disconnect.	28.81 seconds average. Due to storm Arwen, Barra, Malik/Corrie and Franklin. Zero calls forced disconnected.	34.49 seconds average. Due to storm Arwen, Barra, Malik/Corrie and Franklin. Zero calls forced disconnected.
● Ensure abandoned calls are less than 1%.	5.46% in Faults and Emergencies primarily due to Storm Arwen where we made a decision to leave our callback facility in place to ensure all customers who wanted to speak to us received a callback, even if this callback was >60 mins and counted as an abandoned call.	7.13% in Faults and Emergencies primarily due to Storm Arwen where we made a decision to leave our callback facility in place to ensure all customers who wanted to speak to us received a callback, even if this callback was >60 mins and counted as an abandoned call.
● Provide restoration time for every outage.	Embedded in standard business process.	Embedded in standard business process.
★ Write to all customers in advance of planned interruptions and day before reminder by SMS (text).	Embedded in standard business process plus face to face visits targeting 100% Vulnerable Customers ahead of every planned outage.	Embedded in standard business process plus face to face visits targeting 100% Vulnerable Customers ahead of every planned outage.
★ Respond and resolve all complaints quickly.	88.6% of all complaints resolved within 1 day.	87.71% of all complaints resolved within 1 day.
● Reduce number of complaints by understanding root causes.	Ongoing analysis understanding root cause including impact of weather conditions.	Ongoing analysis understanding root cause including impact of weather conditions.
● Achieve a 20% improvement in industry measure of customer satisfaction scores by 2023.	Overall score of 9.17. Above DNO (Distribution Network Operator) average of 9.03.	Overall score of 9.21. Above DNO (Distribution Network Operator) average of 9.03.
● Hot meals and accommodation provided after 48 hours to all customers during exceptional events (after 12 hours for vulnerable customers).	Embedded in standard business process.	Embedded in standard business process.
★ Benchmark industry performance utilising Institute of Customer Service (ICS).	ICS benchmarked SPEN 1st place against ALL UK service sectors.	ICS benchmarked SPEN 1st place against ALL UK service sectors.
● Invest in people at every level.	Designed in to management systems and reporting.	Designed in to management systems and reporting.
● We will include info about our Guaranteed Standards of Performance (GSOP) in our annual customer awareness campaign.	GSOP information is communicated to customers annually.	GSOP information is communicated to customers annually.
● We will contact customers impacted by an outage to keep them informed via different channels.	We communicate with customers through multi channels during power outages.	We communicate with customers through multi channels during power outages.
● We will use Smart Meter data to proactively help customers.	Metering installations has not materialised. Accordingly, we have not been able to fully realise the benefits of Smart Metering.	The forecasted increase in Smart Metering installations has not materialised. Accordingly, we have not been able to fully realise the benefits of Smart Metering.



Consumer vulnerability strategy

We now deliver a range of services available to all vulnerable customers which have been developed in our most vulnerable communities. We strive to exceed our business plan commitments to ensure that the customer receives the best service possible.

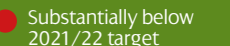
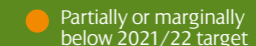
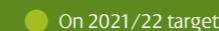
Commitment	Jointly across SPD and SPM this year
● Send a welcome letter and info pack to every new customer on the Priority Services Register (PSR).	Embedded in standard business process.
● Proactively contact all PSR customers during an outage.	Embedded in standard business process where a customer is confirmed off supply.
★ Contact all vulnerable customers in advance of planned power interruptions.	Embedded in standard business process where a customer is confirmed off supply – with flexibility for more frequent contact of needed.
● Hot meals, drinks and company offered to vulnerable customers after 12 hours during exceptional events.	Embedded in standard business process.
● Winter packs issued to PSR customers.	Delivered to all of our PSR registered customers who request a pack as a standard business process – with assistance from Red Cross partners during significant events.
● Automatic compensation payments following a fault to all PSR customers post 12 hour restoration during exceptional events.	Embedded in standard business process.
● Proactively contact all PSR customers at least every 2 years.	Embedded in standard business process.
★ We will always ensure our people are trained to recognise and deal with vulnerable customers sensitively.	Our Vulnerability Training Programme has resulted in 6,000 hours of training delivered to our staff over 2021/22 over multiple diverse types of training which covers the needs of our vulnerable customers and how to support them.
● We will continue to establish mechanisms to share information on vulnerable customers with other agencies and authorities.	Data sharing through informed consent in place. Continued our collaboration with partners to ensure that our customers can assess more comprehensive support, delivered efficiently, from a multitude of relevant organisations including emergency support, utilities, suppliers.
★ We will engage with our communities to make them aware of our Priority Services Register and work in local communities impacted by outages to ensure they have access to hot meals, drinks and company. We will continue to work with Emergency Planning Officers to provide support to our vulnerable customers during outages.	Targeted awareness carried out to promote Priority Services Register in our communities through several channels specifically aimed at reaching vulnerable customers. Stretching targets in place to ensure we have 80% of customers signed to our register for each category where they are eligible.
★ We will deliver initiatives that will help the fuel poor by working with agencies such as Energy Action Scotland, National Energy Action, Scottish Government Fuel Poverty Group, etc.	We work with local partnerships to deliver support services to our customers which delivered a total economic value of delivered on average £1.88 value to customers for every £1.
● We will continue to work with agencies to understand how we can collaborate to best support our customers and communities.	We have worked closely with a number of agencies to understand vulnerability, customer needs and how we can best offer support.



Stakeholder engagement

We put stakeholders at the heart of what we do; it's part of our culture. Our comprehensive strategy has grown in maturity, and is embedded in our organisation at all levels. We deliver it with passion, belief and strong executive leadership, placing robust, meaningful engagement at the core of all our activities.

Commitment	Jointly across SPD and SPM this year
★ We will continue our annual customer awareness campaign to raise awareness of who SPEN are, and information of when and how to contact us.	Within this regulatory year, we have delivered 491 pieces of coverage during the period which delivered 446,546,041 opportunities to see. We increased our PSR registrations by 140,000 households this year with 370,847 new vulnerabilities added (i.e. multiple vulnerabilities per household). We increased our overall PSR registrations from 1,191,695 to 1,331,973, an overall increase 10%. Our awareness campaign had a PR activity reach of 408m impressions and 399 pieces of coverage, delivering key safety messages and 105 awareness to our customers and communities. Phone Kiosks and Bus Streetliners were implemented to increase our high street presence to support the delivery of these key messages throughout our communities. We activated tactical short term storm activity across large, high impact digital roadside formats during periods of bad weather.
● We will report our performance against plan and outputs at an annual stakeholder event.	Performance is reported to stakeholders at several times a year through our Strategic Stakeholder Panels and events and annual district updates. In 2021/22, we held a broad range of engagement events including our Strategic Stakeholder Panel events, Net Zero Conferences, Connections Panels and COP26 conferences, led by senior leaders which facilitated a range of strategic conversations with a broad range of key stakeholders.
● We will provide an annual stakeholder communication on our engagement activities and actions.	Annual stakeholder engagement report is provided to Ofgem and key stakeholders and published on our website detailing our activities, actions and outputs. We produce regular online newsletters, social media posts and stakeholder event updates for stakeholders with details of industry developments, innovations and investment. We have a dedicated events page on our website which promotes transparency of our engagement opportunities for our stakeholders to engage with us – www.spenergynetworks.co.uk/pages/stakeholder_event.aspx
● We will further develop our online community to support our stakeholder, customer and employee engagement programmes.	Our Stakeholder Online Community Platform provides a two-way platform for engagement between SP Energy Networks and our stakeholders in between formal engagement events. How we interact and collaborate with our stakeholders is key to gaining strong insight and feedback from them, which will ultimately aid our decision-making processes. This year, we have further developed by creating topic specific engagement sub-groups within our online community to facilitate more in-depth engagement with expert stakeholders.
● We will introduce an annual programme so stakeholders know what engagement to expect.	We have a mature programme of engagement embedded across our organisation for both business as usual and ED2 business planning supported by our stakeholder database system, Tractivity – providing a robust, multi-layered annual engagement programme rolled across the entire business.
● We will embrace stakeholder engagement as 'business as usual' and will build on the approach of more focused and centralised engagement.	This year, we're extremely proud to announce we remain to be one of the top scoring utilities for our AccountAbility healthcheck, with a score of 85%, a 19% improvement since our first healthcheck in 2018. We're one of the top 10% of companies assessed globally, spanning multiple industries. We achieved a score of 5.29 in 2021/22 for the Ofgem Stakeholder Engagement and Consumer Vulnerability (SECV) incentive which is a drop in performance from last year, however we are working hard to address the identified areas for improvement



Connections

Our network is expanding to accommodate renewable generation more quickly than any other DNO. We are providing a better service for new connections by adhering to our business plan commitments.

Commitment	SPD this year	SPM this year
● Contact the customer within 1 working day of receiving their application to provide a single point of contact to manage their project through our quotation process.	We endeavour to contact the customer within 1 working day of receiving their application as a standard business process.	We endeavour to contact the customer within 1 working day of receiving their application as a standard business process.
● Reduce the average time taken to issue quotations year on year.	The average has increased from 3.1 to 3.97	The average has increased from 4.4 to 4.93.
● Contact the customer within 2 working days of receiving their payment to provide a single point of contact to manage their project through our delivery process and where possible provide a date for connection.	97.5% contacted within 2 days.	96.0% contacted within 2 days.
● Engage and proactively work with our customers to meet their preferred completion and 'power on' date.	99.9% of completion dates are as agreed with customer, improvement year on year.	99.8% of completion dates are as agreed with customer.
● Reduce the average time to deliver connections year-on-year. (The Time to Connect targets are 42.08 for a single property and 52.70 working days for multiple properties).	Our Average time to Connect was 34.24 working days for single premises and 39.34 working days for multiple premises a small improvement year on year.	Improved the time to connect averages for both single premises from 43.2 to 36.68 and multiple premises from 60.6 to 39.98.
● A 'Process Explained' leaflet will be issued to all customers at initial enquiry stage and is available on the website.	Embedded in standard business process.	Embedded in standard business process.
● Ask our customers when they want their quote and work with them to deliver a fast-track quotation and connection when they need it.	69.0% of quotes provided within timescales agreed with customer.	73.6% of quotes provided within timescales agreed with customer.
● Continually develop and improve our processes, based on our customer's expectations and customer feedback.	Ongoing activity – as per our ICE plan.	Ongoing activity – as per our ICE plan.
● Our processes and internet site will be continually developed and improved, based on our customer expectations and feedback.	Wide range of customer-facing improvements delivered with supporting feedback received from our Major Customer Monthly Survey.	Wide range of customer-facing improvements delivered with supporting feedback received from our Major Customer Monthly Survey.
● Incentive on Connections Engagement ICE.	Engagement drove 13 improvement actions – 100% of which already delivered.	Engagement drove 13 improvement actions – 100% of which already delivered.
● Ensure our average time to deliver connections is in the top group of DNOs.	11th in the DNO league table in Ofgem's 2021/22 Annual Report.	12th in the DNO league table in Ofgem's 2021/22 Annual Report.
● Reduce our general load investment trigger by 20%, enabling quicker connections in future.	We are on-target and delivering against our load related reinforcement plan to facilitate capacity in demand congested areas of network.	We are on-target and delivering against our load related reinforcement plan to facilitate capacity in demand congested areas of network.

Connections (continued)

Commitment	SPD this year	SPM this year
● Use innovative solutions to meet the uptake of low carbon technologies.	We have connected customers using non-firm flexible connections and will be deploying wide scale Active Network Management over the next few years.	We have connected customers using non-firm flexible connections and will be deploying wide scale Active Network Management over the next few years.
● Ensure our customers are kept informed of the connection process throughout every stage.	Embedded into business process – monitoring and reporting in place to deal with exceptions.	Embedded into business process – monitoring and reporting in place to deal with exceptions.
● Be proactive in our approach, minimising the need for customers to have to contact us – we will contact them first.	Embedded into business process – monitoring and reporting in place to deal with exceptions.	Embedded into business process – monitoring and reporting in place to deal with exceptions.
● Communicate with our customers through their media channel of choice.	Customers preference of available channels captured in our systems.	Customers preference of available channels captured in our systems.
● Develop communication plans tailored to meet individual needs.	Customer communications recorded in our systems, monitoring in place to drive continuous improvement.	Customer communications recorded in our systems, monitoring in place to drive continuous improvement.
● Through our communication plans we will remove any uncertainty.	Ongoing activity – as per our ICE plan.	Ongoing activity – as per our ICE plan.
● Actively engage customers and stakeholders through events, monthly surgeries, surveys and one to one meetings to understand their ongoing needs.	Ongoing activity – as per our ICE plan.	Ongoing activity – as per our ICE plan.
● Continue to work with our major customers to further improve the service we offer.	Ongoing activity – as per our ICE plan.	Ongoing activity – as per our ICE plan.
● Build our business, operating and improvement plans around the needs of our customers and stakeholders.	Ongoing activity – as per our ICE plan.	Ongoing activity – as per our ICE plan.
● We will continue to work proactively with 3rd party groups wishing to connect to our network.	Partnerships and bi-annual workshops established in 2017.	Partnerships and bi-annual workshops established in 2017.
● We will continue to promote competition in every way we can.	Covered in our adoption of Competition in Connection Code of Practice, for example additional data on loadings and network maps provided.	Covered in our adoption of Competition in Connection Code of Practice, for example additional data on loadings and network maps provided.
● We will continue to engage with Ofgem and ICPs to extend the boundaries of competition.	Ongoing engagement – including 2 dedicated workshops in SPD's area.	Ongoing engagement – including 2 dedicated workshops in SPM's area.

Environment

We recognise the significance of our impact on the environment, both as a direct result of our operations and, indirectly, by helping stakeholders achieve their own environmental goals.

Commitment	Jointly across SPD and SPM this year
● Utilise Smart Meter technology to ensure all generation sources are supported quickly.	Installations under the UK's Smart Metering Implementation Programme recovered somewhat during the 2021/22 regulatory year, following significant impact as a result of the Covid-19 pandemic in the previous year. By 31st March 2022 there were approximately 250k SMETS2 devices in our SP Distribution licence area, with approximately 298k in SP Manweb area. During 2021/22, our systems were enhanced to be compatible with older SMETS1 devices, where previously we could only communicate with SMETS2 meters. However, SMETS1 devices must be enrolled into the UK's Smart DCC infrastructure to ensure we can connect, and the enrolment process is controlled by Electricity Suppliers. By the end of the year, we were able to communicate with 246k SMETS1s in SP Distribution area, and another 241k in SP Manweb.
● Connect 4.5GW of Distributed Generation by 2018, with up to 5.5GW of generation connected to our network by 2023.	We have now connected 4.45 GW combined generation over SPM and SPD to the existing network.
● Carry out 'Smart' asset replacement — using future proofed assets where justified.	Our LV Engine project is a trial of Smart Transformers, powered by Power Electronics and cutting-edge intelligent control, to facilitate the connection of low carbon technologies whilst delivering value for money for our customers. After completion of detailed design phase, we have now built a number of prototypes which are under various factory tests to ensure compliance with UK DNO standards. We have also designed an innovative strategy for DC protection which will be tested this year in a controlled laboratory environment before installation and commissioning in real distribution network. We have progressed further on site preparation in our trial site where our Smart Transformer will be deployed to supply an ultra-rapid DC-fed EV charger at the start of the Electric A9, this project is the first of its kind in the UK if not world.
● Identify low carbon technology hotspots using network monitoring, data from Smart Meters and stakeholder engagement.	We have now fully implemented the next generation of heat maps. These have been developed through extensive consultation with our stakeholders and are available on our website .
● Underground 85km of overhead lines in Areas of Outstanding Natural Beauty.	We continue to target measures to reduce the visual impact of our network by removing overhead lines from Areas of Outstanding Natural Beauty (AONB). This year we removed a further 10.11km of overhead line and installed 8.78km.
● Install lower transformers to reduce losses by 50% at more than 1,111 of our secondary substations.	During the 2021/22 reporting year we have installed 78 lower loss transformer's in SPM and 75 lower loss Transformers in SPD. We have so far replaced a combined SPD and SPM total of 762 transformers during ED1, saving 26,288 MWh of losses. Based on the current average carbon intensity of grid electricity, this would be equivalent to 5,582 tCO ₂ e.

Environment (continued)

Commitment	Jointly across SPD and SPM this year
★ Reduce our carbon footprint (excluding network losses) by 15% by 2023.	In 2021/22, we have achieved a 56% reduction in our combined (SPD & SPM) carbon footprint, excluding losses, since setting a 15% reduction by 2023 target in 2013/14. The Business Carbon Footprint graph shows our progress through ED1. This represents a 15% reduction in SPM and a 76% reduction in SPD. Electricity losses (energy lost or stolen from the network as it travels from source to user), remains the largest contributor to our Business Carbon Footprint and also the most influenced by external factors.
● Use electronic vehicle management system to optimise our vehicle utilisation keeping vehicle numbers, broadly similar in ED1.	Our vehicle tracking system continues to allow us to track our mobile assets and their emissions effectively. Vehicle numbers remain the same as we progress towards electrification of our fleet. Since the start of ED1 our carbon emissions from fleet vehicles have reduced by 2% in SPM and 28% in SPD.
● Monitor and reduce the energy used within our substations, invest in lower carbon buildings and reduce energy use in existing buildings.	Until 2019, energy consumed within our depots and substations was our second biggest emissions contributor after losses, and it was therefore imperative that we work to reduce the carbon emissions related to energy use at our sites. In 2019, we amended our tariff to REGO '(Renewable Energy Guaranteed Origin)' which provides us with guaranteed zero emission electricity. During this our now second full year of reporting after our move to a REGO tariff, our buildings and substation energy use now makes up less than 2% of our total carbon footprint excluding losses. While we recognise that annual fluctuations in grid carbon intensity and our move to a REGO tariff contribute greatly to the reduction in the carbon footprint of our depots, substations and buildings, we must also concentrate on reducing the kWh consumed. In this reporting year we have installed modern efficient heating, ventilation and air conditioning systems at our Bonnybridge and Dumfries depots, which will save an estimated 72,459 kWh of energy annually. In addition, we have installed PV solar panels at our Lister Drive and Prenton offices and while we are still awaiting official estimates, we anticipate these installations will dramatically reduce our net energy consumption. In future years, we will continue our programme of replacement and refurbishment of inefficient older buildings to further reduce our energy use.
● Reduce costs to customers by developing modern "Smart Grid" network solutions.	We are carrying out a wide range of projects utilising Smart Grid network solutions to reduce customer costs and encourage greater market flexibility. We have identified specific opportunities and challenges split across three themes in this priority area namely: Faster, Easier Connection, Preparing the Network for Low Carbon Technologies, Network Flexibility and Communications
★ Increase the use of electric vehicles and charging points.	During the 2021/22 reporting year, we have introduced another 11 electric vehicles to our fleet of pool cars. This brings our electric vehicle fleet to 33 in Distribution. Since the start of ED1, we have installed 53 charging points for Electric Vehicles at our Depots and Offices. Although we have installed no new charge points at our offices in the 2021/22 reporting year, we have plans to install 38 new double charge points between 1st April 2022 and 31st March 2023.

Environment *(continued)*

Commitment	Jointly across SPD and SPM this year
● Install oil containment around all new and high risk plant containing high volumes of oil.	In SPD during ED1 we have worked on 72 pieces of plant equipment to install oil containment with 4 taking place in the reporting year 21/22. In SPM during ED1 we have worked on 67 pieces of plant equipment to install oil containment with 1 taking place in the reporting year 21/22.
● Exceed IEC international standards for SF ₆ switchgear by specifying a maximum leakage rate five times more stringent for 33kV and below and twice as stringent for higher voltages.	In 2021/22 we continued to drive the supply chain towards developing equipment with reduced SF ₆ leakage rates, having embedded this requirement in our procurement and specification processes. The International Electro-Technical Commission (IEC), the body responsible for setting international guidance recommends a leakage rate of 0.5% (indoor equipment). Our equipment specifications demand a more stringent maximum leakage rate of 0.1% for all indoor and 0.25% for all outdoor equipment each year.
★ Reduce oil leaks by 50% through the replacement of poorly performing 132kV cable in SPM.	In SPM we have 159 km of fluid filled cables and topped up a total of 2195 litres in the 2021/22 reporting year with a leakage rate of 0.3%. In SPD we have 29km of fluid filled cables and topped up 74 litres in the 2021/22 reporting year with a leakage rate of 0.09%. At the start of ED1 we set ourselves a target to reduce leakage in our SPM fluid filled cables. Since reporting year 2015/16 we have achieved an 84% reduction in fluid filled cable top ups.
● Engage on the environmental impacts of our developments from a very early stage.	We have a dedicated Environmental Planning team who engage with our engineers and legal teams in our developments early stages as a standard business process.
● Utilise low carbon alternatives to travel, through the use of technology and smarter ways of working.	Since the start of ED1 we have reduced our business travel carbon emissions by 56%. This overall reduction is a result of accurate apportionment between our licenses, reduction in overall travel, competitive rail pricing and increased staff awareness of carbon emissions from travel. In 2021/22 we have seen an increase of 27% in emissions in business travel across SPM and SPD combined, due to easing of COVID-19 restrictions. However the introduction of new travel and teleworking policies during this time will allow us to continue to target this area for sustained and further reductions in the coming years.

Health & Safety

Health and safety goes right to the heart of all our operations, it cannot be achieved successfully unless it is fully integrated with all other aspects of day-to-day business management.

Commitment	Jointly across SPD and SPM this year
● Lead the industry for public safety.	Zero Improvement Notices, Prohibition Notices or Prosecutions.
● Maintain a positive relationship with the Health and Safety Executive (HSE) through positive engagement.	A range of discussions held with the HSE on a number of network related topics including HSE Priority Interventions with all DNOs, managing public safety and metal theft.
● Lead an effective risk based public safety programme.	Wide range of initiatives including demonstrations and stalls at numerous agricultural shows including the Royal Highland Show, Anglesey Show and Royal Cheshire Show, support of safety education centres and Crucial Crew events.
● Safeguard residents of flats and tenement buildings by continuing our major investment programme to modernise service positions and cables.	SPEN spent £8.1m modernising the electricity supply to residents of flats and tenement buildings in 2021/22.
● Eradicate all low overhead line clearances across roads by April 2015 and continue to enhance public safety by upgrading all of our overhead line clearances to the latest industry technical standards by 2020.	SPEN spent £17.5m on OH Clearances in 2021/22.
● Increase the rate at which we modernise our substations by over 20%, improving safety and security of supplies at a lower overall cost.	SPEN replaced 1,553 items in High Voltage Substations in 2021/22.
● Meet or improve upon our accident rate performance metrics defined within our internal continuous improvement Health and Safety operating plans.	Staff Lost Time Accident Rate of 0.07. In 2021/22 we saw a reduction in the LTA Rate for staff from 2020/21.
● Conduct thorough incident investigations, learn lessons quickly and implement changes to make our business safer.	2 Panels of Inquiry were conducted in 2021/2022.
● Help our contracting teams to reduce their accident rate.	Contractor Lost Time Accident Rate of 0.25. In 2021/22 we saw a reduction in the LTA Rate for contractors from 2020/21.
● Put the 'Health' into Health and Safety – our employees will benefit from a risk based occupational health monitoring programme.	664 employees completed Health Surveillance Monitoring assessments in 2021/22.
● We will safeguard our staff, members of the public and minimise disruption to supplies by implementing additional security measures to reduce the impact of interference and metal theft at our high-risk substations.	Substation security continues to improve by means of asset modernisation and enhanced civils. We are also continuing to roll out e-padlocks on a priority basis.

Appendix B

Our business

Appendix B

Our biggest assets are our people

Develop and train our staff for a 'smarter' future and replenish our ageing workforce from the communities that we serve so that the investment that we make in recruitment and training continues to deliver in the long-term.

We have continued to progress at pace with our plans to develop our internal team members and new recruits to the business. We recruited our traditional programmes of Craft Apprenticeships and Graduates complemented by a large intake of our Adult Craft Apprenticeship for candidates that join the business with enhanced skills and maturity. This is in response to the forecast increased resource required for jointing associated with connecting EV chargers and other new connections to our network.

We have continued to recruit a range of disciplines within our graduate intake to include digital skills such as data analytics, cyber security and systems electronics in addition to our traditional engineering. In addition, we have continued to recruit Power Engineering Apprentices and Project Management Apprentices, and to recruit additional graduate level apprentices in data analytics and business.

For our internal teams we have delivered a new wave of Engineering Trainees for our Industrial Staff Trainee programme which will upskill our Industrial Team Members to Operational Engineers within the business. The combination of these programmes has seen the business spend over 105,000 hours of Technical Training in our Technical Training Centres at Hoylake and Cumbernauld.

Industrial Trainees

We delivered against our plans to continue to grow our own talent and develop our teams from grass roots. To achieve this we recruited 27 Apprentices and 61 Trainee Craftpersons to complement our industrial trainee talent pool and prepare for increased workload in ED2. We are developing this team to reach multi craftsperson level across all three trade types of Fitting, jointing and Overhead lines.

Engineering Skills

We have continued to provide ongoing STEM and career support to local schools, colleges and Universities, with some events still taking place on-line post Covid. We have also continued our expanded Year in Industry programme through the Engineering Development Trust to take 24 young people into the business to give them valuable work experience, with a number of them ultimately moving onto our trainee programmes. In parallel to this, we continue to support our scholarship programmes through the IET and University partners, with a total of 43 scholars and additional summer internships.

We continue to run our STEM Returners programme which supports people who have STEM experience back into work after a career break. By supporting these programmes we are positively promoting our business, supporting the communities we serve and are providing opportunities for local people and our trainees to develop their interpersonal skills, providing them with a more holistic training programme.

56

Specialist and
Engineering trainees
recruited



88

Industrial trainees
recruited



Appendix C

Glossary

Appendix C

Glossary

Areas of Outstanding Natural Beauty (AONB)

Means protected landscapes in England, Wales and Northern Ireland as defined in the National Parks and Access to the Countryside Act 1949 (and includes National Scenic Areas in Scotland, as comparable to AONBs). Ofgem provide DNOs with an allowance for undergrounding overhead lines in these areas.

Customers Interrupted (CI)

The number of customers in every 100, whose supplies have been interrupted per year over all incidents, where an interruption of supply lasts for three minutes or longer, excluding re-interruptions to the supply of customers previously interrupted during the same incident.

Customer Minutes Lost (CML)

The duration of interruptions to supply per year – average customer minutes lost per customer per year, where an interruption of supply to customer(s) lasts for three minutes or longer.

Distributed Generation (DG)

Generation connected to the distribution network, such as wind turbines, domestic solar panels, photovoltaic farms, hydroelectric power and biomass generators.

Distribution Network Operators (DNOs)

DNOs are the organisations that look after the networks transporting electricity to end users such as homes and businesses. In England and Wales, DNOs manage the network from 132,000 down to 230 volts. In Scotland, DNOs manage the network from 33,000 volts to 230 volts. The UK distribution network is divided into 14 distribution areas and these are managed by 6 DNOs.

Distribution System Operator (DSO)

The DSOs role will be to maintain system security and quality of service in distribution networks in order to serve network customers. The DSO will help with market facilitation, encourage transparent and non-discriminatory access, and ensure security of system and quality of service.

ED1

ED1 (Electricity Distribution) price control set the outputs that the 14 electricity Distribution Network Operators (DNOs) need to deliver for their consumers and the associated revenues they are allowed to collect for the eight-year period from 1 April 2015 to 31 March 2023.

ESQCR (Electrical Safety, Quality and Continuity Regulations)

Duty holders have duties to report certain incidents that may involve the safety of those not employed by the duty holder (enforcement by HSE), major supply interruptions (enforced by Department of Energy and Climate Change) and domestic fatalities (enforced by Department for Business, Innovation and Skills).

Exceptional Event (Often referred to as a Severe Weather Event or Significant Event)

An event where the number of incidents caused by the event at distribution higher voltage in that period is equal to or greater than the commencement threshold number. In SPD the threshold is 76 and in SPM the threshold is 68. 'Distribution Higher Voltage' means any nominal voltage of more than 1,000 volts up to and including 132 kilovolts (except in Scotland, where it means any nominal voltage of more than 1,000 volts but less than 132 kilovolts).

Fluvial Flood

Flooding that occurs as a result of flooding from rivers and watercourses.

Guaranteed Standards of Performance (GSOPs)

These are the minimum levels of service to be met across a range of customer facing activities, including how we manage power cuts, connections and customer complaints. If we fail to provide the level of service required, we make a payment to the customer affected. There can be certain exemptions to these compensation payments, for example during extreme weather events.

Health and Safety Executive (HSE)

The government body responsible for enforcing health and safety legislation.

Incentive on Connections Engagement (ICE)

This is an incentive designed to encourage DNOs to improve the way they communicate with major connections customers.

Glossary *(continued)*

Low-carbon Technology (LCT)

Technologies designed to reduce the amount of carbon we use, including electric vehicles, heat pumps, wind turbines and solar panels.

Lower Layer Super Output Area (LSOA)

Is a means of reporting deprivation by the Office for National Statistics.

National Parks

Means the areas that are designated as protected areas as defined in the National Parks and Access to the Countryside Act 1949.

National Scenic Areas

Means the areas that are defined in the Town and Country Planning (Scotland) Act 1997 as being of outstanding scenic value in a national context.

Network Analysis & View (NAVI)

Tool which facilitates detailed scenario analysis and modelling in ED2.

Network Controlable Points (NCP)

Plant and apparatus that has automation fitted to carry out operations on the network remotely. This remote switching reduces the need for field engineers onsite and allows quicker restoration of customers during fault operations. It also enables the ability to apply schemes to specific circuits which can restore customers based on alarms and indications without human input, making our network smarter and safer.

Network Operating Costs

Expenditure on operating and maintaining the network, e.g. fault repair, tree cutting, inspection and maintenance, engineering and business support costs.

Priority Service Register (PSR)

Our register of vulnerable customers, enabling us to provide additional support when required. Stakeholder Engagement and Consumer Vulnerability (SECV) Incentive Drives network companies to engage with stakeholders and address consumer vulnerability issues. The SECV Incentive is designed to only reward network companies for high quality activities or outcomes that go beyond business as usual. Network company provide a submission to the regulator in relation to engagement activities carried out during the regulatory year in question. The regulator will assess this submission in three stages (internal assessments, panel assessment and an external consultant assessment for the consumer vulnerability).

Smart Meter

Advanced gas and electricity metering technology that offers customers more information about, and control over, their energy use (such as providing information on total energy consumption in terms of value, not only volume), and/or allows automated and remote measurement.

Time to Connect and Time to Quote

This new incentive will measure the time taken from initial application received to the issue of a quotation and the time taken from quotation acceptance to connection completion. The incentive will capture minor connections customers. No exemptions apply.

Unrestricted Domestic Tariff

The estimated annual cost of distribution to the typical domestic customer under the Common Distribution Charging Methodology, assuming a certain level of consumption for the chosen customer category and the total allowed income that is being targeted (reflecting previous under/over recoveries and various incentives).





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