SP Energy Networks

Distribution Annual Report 2019/20

SP ENERGY NETWORKS

2019/20 Highlights

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

9/10
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.

1st

Benchmarked 1st against all UK service sector by Institute of Customer Service, beating out other companies like First Direct, John Lewis and Nationwide.

1st

utilities company in the world to achieve the prestigious BSI Kitemark for Customer Service.

89%

of all complaints were resolved within 1 day.

99.9%

of our customers experienced zero supply interruptions or were restored in 6 hours.

+1m

150k have been added to the PSR in the year taking our total to over 1m.

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.

24p
per day

Our customer bills have fallen by 10% since 2015/16, with our customer's paying around 24p per day for our service – less than a Netflix subscription and a 2nd class stamp.

336MW

Launched our biggest tender for flexibility services to procure 336MW of flexibility service.

We connect 1/4 of all GB's onshore wind

SPEN are at the forefront of decarbonising our energy system having connected ~2GW of onshore wind to our distribution network.

Provided financial support to several low-carbon local community projects through our Green Economy Fund, helping Scotland reach its green targets.

Reduced carbon footprint by

55%

We achieved our 2023 target of a 15% reduction in emissions in 2015 and we continue to exceed this reduction year-on-year.

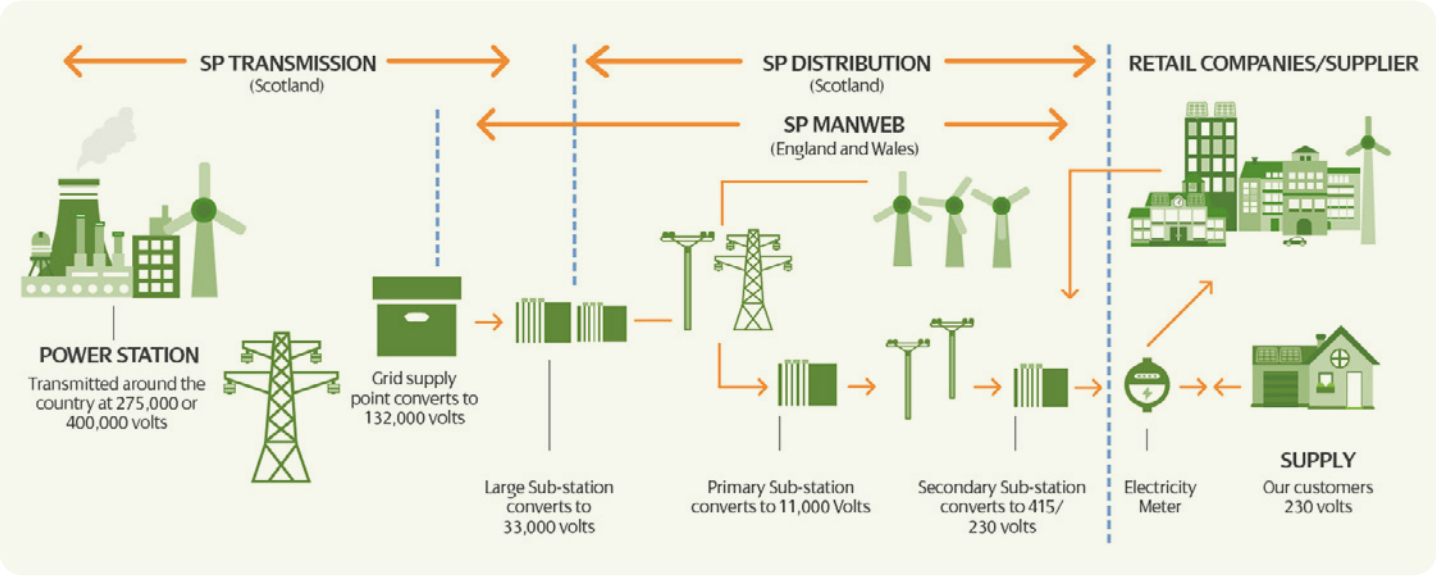
Support EV rollout

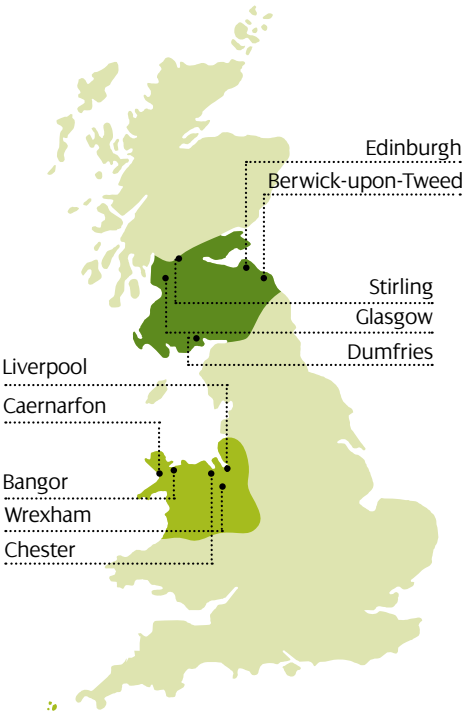
Ensuring people benefit from the wide scale EV uptake by finding innovative and cost-effective ways of developing, managing and operating EV charging infrastructure through our various projects (e.g. Project CHARGE).

Accelerating the development of the DSO concept through projects such as our ANM project in Dumfries and Galloway will help to achieve a reduction in CO_2 emissions of 522k tonnes by 2031 – equivalent to the annual emissions produced from 110,000 diesel/petrol vehicles.

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 2019/20.

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, 38,478km of overhead lines and 67,472km 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 Frank Mitchell, CEO of SP Energy Networks

This report shows how our business has performed during 2019/20.

Welcome to our fifth 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.

Every part of our society has been impacted by Covid-19. It has challenged how we think about resilience and how we enact our response to this is imperative. We have continued to serve our distribution customers in the Central Belt and South of Scotland, Merseyside and North Wales with 99.99% reliability levels for 24p per day.

In the coming months and years, electricity networks will operate as catalysts to GB's economic recovery. Advisors to government are recommending green economic recovery investment in infrastructure for this reason. We believe that investing to deliver Net Zero targets presents a critical opportunity to restart our economy, deliver much needed jobs, and inject sufficient pace into the Net Zero transition.

We are working hard to help the Scottish, Welsh and UK governments deliver their plans to meet the challenges of the low carbon revolution, with a focus on accommodating increasing electrical flows associated with growing low carbon energy sources and meeting the needs of both our current and future customers. All parts of society must benefit from the low carbon evolution.

There has been much debate around the role of anticipatory investment for low carbon solutions. We must invest in our infrastructure now in order to avoid significant lost opportunity costs. We cannot strangle the pace required to meet Net Zero as Network companies will be key enablers to a 'Green economic Recovery'.

As part of our transition to a low carbon society, Electric Vehicles are becoming a reality. Over the next decade, we 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 Distribution FES forecasts that 1.2m EVs will connect to our own network by 2030 and will add 636MW to our peak demand. By 2050, we expect Projects like EV PACE will be able to support governments' and customers' ambitions without introducing unnecessary delays.

This year we have further facilitated competition by launching our biggest tender for flexibility services to procure 336MW of flexibility services at over 1000 locations across both of our licence areas. We plan to continue to utilise flexibility for deferring or avoiding the need for network reinforcement and to provide.

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 and work with our stakeholders to positively influence the RIIO-ED2 Business plan process. Our ED2 Price control team have already been engaging with you and will continue to do so to develop our next set of business plans due to be submitted to Ofgem in Summer 2021, which will detail our investment decisions for the years 2024 to 2029.

Snapshots

Performance snapshot: SPD Pg 4
Performance snapshot: SPM Pg 5

2019/20 Outputs

Summaries of all of the key indicators and data by area or theme, in total covering all of our commitments.

Reliability and availability Pg 7
Keeping the light on. Outputs on the number and duration of power cuts.

Health & Safety Pg 8
Protecting the public and the people who work on our network.

Customer satisfaction Pg 9
Keeping our customer well-informed, and responding quickly and efficiently to queries.

Stakeholder engagement Pg 10
How we are working with our stakeholders, and involving them in our decision-making.

Consumer vulnerability strategy Pg 12
Supporting our customers and communities and tackling wider social issues.

Connecting to our network Pg 15
Meeting the needs of households, businesses and generators who want to connect to our networks.

Innovation and future networks Pg 16
How we harness technological and commercial innovation to reduce costs and improve service.

Environment Pg 18
How we promote the low carbon economy, and minimise our own environmental footprint.

Expenditure and Revenues Pg 20
The key facts about our expenditure and revenue, and how it affects your bill.

Looking forward Pg 24
Our view of key up and coming topical issues for 2018/19.

Appendices Pg 29
Further, more detailed and disaggregated information about our performance has been published on our website.

Substantially ahead of 2019/20 target | On 2019/20 target | Partially or marginally below 2019/20 target | Substantially below 2019/20 target

SPD performance snapshot 2019/20

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

Innovation

Given the urgency to deliver the UK's ambitious net zero carbon emissions we are continuing to build upon our award-winning innovation portfolio to develop cutting-edge solutions.

In response to the increasing electrification of transport we have been focusing on the delivery of our successful NIC project submission "CHARGE".

Our innovation programme named DRIVE will further strengthen our culture of innovation by continuing to focus on our People!

Safety

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

Environmental

We have reduced the amount of fluid leaked from our cables by 76% in 2019/20 against our 2015/16 fluid filled cable leakage. This is a direct result of our ongoing policy of strategic leak repair management and targeted asset replacement. In 2019/20 we have achieved a combined SPD & SPM 55 % reduction in our carbon footprint excluding losses since setting our 15% reduction target in 2013/14.

*excludes exceptional events

Our network spans over once

round the globe

Network	Actual 2019/20
Number of customers	2,004,462
Total network length (km)	58,304

Reliability and Availability	Actual 2019/20
Customer interruptions* (Recorded per 100 customers in 2019/20)	44.5
Customer minutes lost* (Average number of minutes our customers had their supply interrupted)	33.7

Exceeding our CI Regulatory target of **50.6** by **12.1%**

Exceeding our Regulatory CML target of **42.1** by **20%**

Customer Satisfaction	Actual 2019/20
Customer satisfaction survey score out of 10	9.17

12% This is 12% better than the regulatory target of 8.2. Overall ranking 2nd place across all DNOs.

Connections	Actual 2019/20
Time to quote (single premises)	3.3 days
Time to connect (single premises)	51.4 days
Incentive on Connections Engagement (ICE)	No penalty

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.

Stakeholder Engagement and Social Obligations	Actual 2019/20
Stakeholder Engagement and Consumer Vulnerability score	6.85 out of 10

Our positive score reflects the activities we do and relationships we have with a wide variety of stakeholders.

Financials	Actual 2019/20 (2012/13 prices)
Unrestricted Domestic Tariff Charge for a typical domestic customer	£82.34
Total expenditure	£211.9m
Percentage of allowed expenditure	111%

Our daily charges are considerably cheaper than a second class postage stamp, a TV Licence or typical domestic broadband services.

SPM performance snapshot 2019/20

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

Our Electricity supply is available **99.99%** of the time

Network	Actual 2019/20
Number of customers	1,508,672
Total network length (km)	46,947

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.

Reliability and Availability	Actual 2019/20
Customer interruptions* (Recorded per 100 customers in 2019/20)	32.3
Customer minutes lost* (Average number of minutes our customers had their supply interrupted)	34.0

Exceeding our CI Regulatory target of **36.4** by **11.3%**

Exceeding our Regulatory CML target of **38.2** by **11%**

Customer Satisfaction	Actual 2019/20
Customer satisfaction survey score out of 10	9.16

12% This is 12% better than the regulatory target of 8.2. Overall ranking 3rd place across all DNOs.

Connections	Actual 2019/20
Time to quote (single premises)	4.64 days
Time to connect (single premises)	55.8 days
Incentive on Connections Engagement (ICE)	No penalty

Stakeholder Engagement and Social Obligations	Actual 2019/20
Stakeholder Engagement and Consumer Vulnerability score	6.85 out of 10

Our positive score reflects the activities we do and relationships we have with a wide variety of stakeholders.

Financials	Actual 2019/20 (2012/13 prices)
Unrestricted Domestic Tariff Charge for a typical domestic customer	£98.60
Total expenditure	£229.2m
Percentage of allowed expenditure	111%

Our daily charges are considerably cheaper than a second class postage stamp, a TV Licence or typical domestic broadband services.

Innovation

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*excludes exceptional events

2019/20 Outputs

2019/20 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

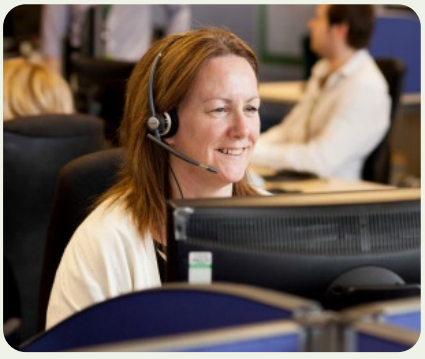
Storm Ciara

'Storm Ciara' impacted 38,988 customers within SPM. 99% of all customers were restored within 24 hrs.

LSS (Logic Sequence Switching)

We already manage the network by automatically restoring a proportion of customers after a fault.

We now have 1,828 LSS schemes built enabling 1.4 million customers to be restored within 3 minutes should they experience a power cut. That's 40% of our customer base.



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 reduction of 89% was delivered by March 2020.

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 11% and the duration of those interruptions reducing by 24%, we are already exceeding these targets.

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

Reductions in the average time our customers are off supply

Substantially ahead of 2019/20 target | On 2019/20 target | Partially or marginally below 2019/20 target | Substantially below 2019/20 target

2019/20 Outputs
Health & Safety

Electricity infrastructure is dangerous. 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

Compliance

We can only be leaders in Health and Safety if we comply fully and demonstrably with relevant laws and regulations. In 2019/20 we continued our constructive engagement with the Health and Safety Executive, and were not subject to any prosecutions.

Public education

Over the last 5 years we have delivered clear, useful information on electrical safety to c225,000+ individuals of which c94,000 children visited safety centres and c40,000 pupils attended 'Crucial Crew' events.

We continued to support the ENA and promoted the use of the construction safety film 'Look Out Look Up'.

We have attended numerous regional agricultural shows and we continue our support of the Welsh Rugby Union, the Glasgow Warriors and Rygbi Goglrdd Cymru (RGC) rugby team who have assisted in our engagement with local communities.

OHSAS 45001

In 2019 SPEN obtained the ISO45001 Health and Safety Management Standard following a successful transition audit carried out by our external auditor in 2019. Obtaining this certification reflects our compliance with health and safety law but also our structured framework that we have in place for ensuring a safe and healthy workplace.

Making our networks safer

In 2019/20 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 all low overhead line clearances across roads.

Keeping our staff and contractors safe

In 2019/20, we delivered our annual operating plan which included our audit and inspection targets and coaching safety training for our Team Leaders. We continue to strive for zero injuries and continue to record very low rates of incidence.

Substation security: protecting people from themselves

This year we continued to target and implement heightened security at various substations, which we analysed as prone to intrusion. Illegal entry into substations in order to steal metal is highly dangerous for the individual, and reduces protection for the local community.

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

Substantially ahead of 2019/20 target | On 2019/20 target | Partially or marginally below 2019/20 target | Substantially below 2019/20 target

2019/20 Outputs
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.

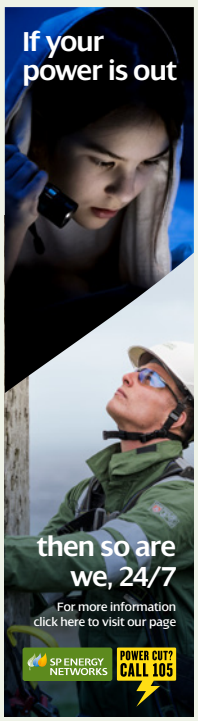
Exceeding targets in most areas, and continuing a trend of strong, sustained improvement, resolving nearly 90% of all complaints within 1 day and exceeding customer satisfaction targets.

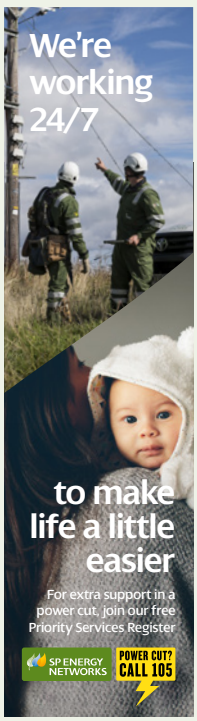
Examples of our performance in action

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 raising activities since 2015 the campaign has seen the number of people who know who to call in a power cut (SPEN via the 105 number) rise from 13% to 47.21% and registrations to the Priority Services Register increased from 8% to 31%.



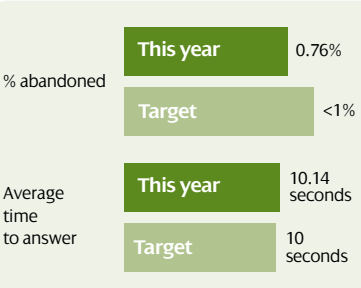


Customer satisfaction

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 9.16 in SPM is a result we are proud of and puts us ahead of where we committed to be on our journey to a score of 9.42.

Responding and communicating

Our customers need to know that they can pick up the phone and talk to us. We have received 937,384 calls this year – of which 768,359 relate to power cuts. Our average time to answer the 768,359 calls was 10.14 seconds with only 0.76% abandoned. Our speed of answer was impacted due to higher volumes of customer calls during storms Dennis and Storm Ciara.



Complaint handling

Our customers also need to trust us to handle any complaints properly. We handled 6,457 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 seven 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

Substantially ahead of 2019/20 target | On 2019/20 target | Partially or marginally below 2019/20 target | Substantially below 2019/20 target

2019/20 Outputs
Stakeholder engagement

Stakeholder engagement remains central to everything we do. Our inclusive approach means we get diverse stakeholder contributions to our business plans, strategies and projects from the outset and throughout.

This year we received an impressive score of 78% in our AccountAbility audit, placing us in the top 10% of companies assessed globally and in to the highest categorisation phase possible – Mature. We also increased results in Ofgem's annual stakeholder engagement incentive this year, placing us second out of all DNOs.

Performance in action – responding to stakeholder feedback

This year, we have made more improvements to our Stakeholder Engagement Strategy to maximise our engagement activities, using our stakeholder feedback pro-actively to deliver the best outcomes for our stakeholders and customers.

Responding to stakeholders, we were the first DNO to send site-specific pricing signals to flexibility providers

Launched 'Zero Carbon Communities Hub', an industry-leading tool to be used by community groups planning and developing renewable energy projects, offering a central source of information helping move projects forward quicker

Assisting Scottish Government and Transport Scotland to install 200 public EV charge points across North and South Lanarkshire in areas not viable for commercial businesses

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.

Our strategic priorities to achieve a better future, quicker have been developed with our stakeholders, who have played a fundamental role in allowing us to take our customers and communities into the future in the most efficient and valuable way, for the whole of society, ensuring that no one is left behind.

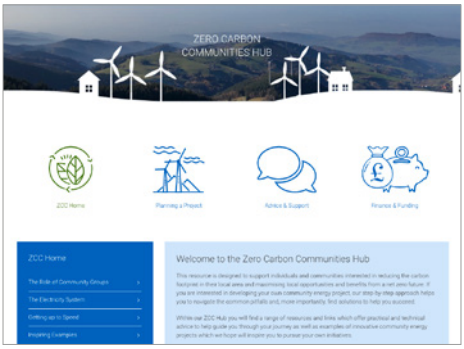
Decarbonisation of Transport and Heat

The decarbonisation of transport and heat remains one of our most critical areas for engagement as Net Zero targets become even more ambitious. By working closely with our stakeholders, we understand the regional requirements and challenges across our licence areas in order to support their plans and targets in the best way possible to accelerate their national and local planning.

We have partnered with Transport Scotland and local authorities, delivering a strategic network of public electric vehicle chargers, whilst piloting an innovative DNO led delivery model which has the potential to be a blueprint for rollout of EV infrastructure across UK. The project is targeting areas and communities which are not currently viable for commercial businesses, ensuring accessibility and fairness for all.

We are also working with University of Strathclyde on a study that considers economic impact of electrification of private transport, concluding that investing in EV infrastructure and adoption of EVs will help shift a post COVID-19 economy onto a pathway for a Green Economic Recovery.

Building on the success of our strategic partnership with Scottish Government, together we are also focusing on decarbonisation of heat, sharing network insight to inform new government policies on Heat and ensuring ambitions are aligned when shaping our investment plans. More widely, we are working closely with local authorities, local communities and project partners across each licence area, seeking their requirements and providing network data to facilitate local energy plans for electric vehicle charging and heat projects.



The Race to Net Zero

As part of our commitment to creating Zero Carbon Communities, we are continuing to engage with our stakeholders and customers to help them on their journey to Net Zero and facilitate government targets. We have developed strategic partnerships with major house builders, community energy schemes and energy innovation projects with a consortium of partners and strengthened our partnerships with local and devolved governments across the UK.

To further support communities, we launched the Zero Carbon Communities (ZCC) Hub, an online tool offering tailored consultancy advice, technical solutions and funding opportunities for new and existing local energy projects. We know the pivotal role our communities have in delivering on Net Zero goals and are invested in supporting them to do just that, so through our engagement, we identified the need for a central source of information to help unlock this potential. This innovative ZCC tool will increase local knowledge and open up opportunities for jobs, the environment and ultimately improve cost-efficiencies in heat and power.

Substantially ahead of 2019/20 target | On 2019/20 target | Partially or marginally below 2019/20 target | Substantially below 2019/20 target

2019/20 Outputs
Stakeholder engagement

The Energy System Transition

Feedback from our stakeholders is driving and informing our transition to DSO (Distribution System Operator). We launched our updated DSO Strategy and are continuously seeking stakeholder feedback on this as we shape our ED2 business plan. We are implementing smarter and alternative ways to manage the network and provide capacity for the increasing connection of low carbon technologies. We are engaging directly with our customers through our flexibility tenders, working together to deploy the lowest cost solutions, be that through service procurement, smart solutions or network reinforcement.

We are transforming the network with products and solutions which could be adopted across the industry and will deliver a smarter, more efficient network for our customers, such as Active Network Management and innovative digital solutions to increase network visibility to operate more efficiently as a DSO. We are sharing more data with stakeholders, increasing their involvement in the energy system and helping them realise cost savings.

External validation

Our annual assurance review from external auditors, AccountAbility reported further improvement in our Stakeholder Engagement performance scoring us at 78%. We are audited on our strategy, processes, governance and engagement activities. It involves providing material evidence and detailed interviews with employees across 10 areas of the business from Director to customer-facing staff members. The improvements made to our processes based on this audit are helping us achieve a more consistent and robust approach to engagement across the organisation.

Our Stakeholder Engagement Strategy has been further embedded within the business this year through improved tools and processes.

53 recommendations were implemented from our AccountAbility Audit to further improve our processes.

"Stakeholder engagement is a key aspect of SP Energy Networks' overall strategy as a business and sub-strategies feature stakeholder engagement as a key practice."

AccountAbility

Continuing to improve our strategy

Continuing to work in alignment with the principles of Accountability Stakeholder Engagement Standard AA1000 – Inclusivity, Materiality, Responsiveness and Impact

485 recorded engagements in 2019/20 with over 200,000 stakeholders engaged through dialogue, consultation and information gathering/giving

Leading 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

SPEN Stakeholder event

Further background

- Stakeholder events
- Stakeholder reports
- Stakeholder registration
- Join our online community

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2019/20 Outputs
Consumer vulnerability strategy

Our vulnerability strategy provides a blueprint that guides our every effort in supporting anyone that finds themselves in a situation of vulnerability, today and in the future.

This strategy has been in place from 2015, has been independently reviewed, updated last year and built on this year and has evolved to reflect the challenges we faced and the lessons we learned. Critically, the existing strategy is the result of an extensive process of stakeholder engagement with vulnerable customers (and those who represent them), stakeholders, vulnerability experts, and our own staff, from the boardroom to the front line.

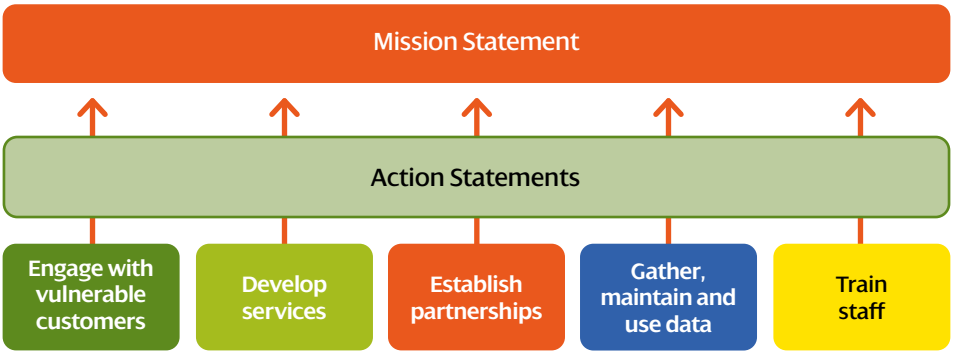
Our strategy consists of two elements:

A mission statement which provides our overarching objective in supporting our vulnerable customers; and

A set of action statements that describe the levers through which we will achieve our overarching mission statement.

This structure allows us to remain focused on our ultimate goal while retaining the flexibility required to meet the changing needs of our customers and responding to external challenges. This year, our strategy focused on delivering three high-level outcomes:

1. Delivering industry-leading value
2. Ensuring no customer is left behind in the transition to Net Zero
3. Building on our existing partnerships and developing our nexus of partner's strategy.



Our mission statement

"SP Energy Networks aims to be a service leader in the UK. We will strive to minimise the impact we have on our communities and provide bespoke support to our customers in vulnerable situations. We will do so by offering the appropriate support to those who need it the most, while providing industry-leading value."

Our mission statement lays out our ultimate ambition. Everything we do in the sphere of consumer vulnerability and beyond is aimed at making this statement a reality. Over the past year we have become the leading network company for customer service and when we measure satisfaction across all of our vulnerable services our customers rate us 94.9% for satisfaction. This demonstrates everyone in SPEN is facing in the same direction to achieve our mission.

Our action statements

1. Engagement
We will engage customers in vulnerable situations directly and through our partners to identify the support that these customers want and need. We will embed tools and processes to ensure that all aspects of our strategy and approach are shaped by those we support.

2. Services
We will develop a portfolio of free services that effectively address the needs of customers affected by our work and alleviate the situations of vulnerability that stem from wider social issues. We will strive to ensure that services represent value for money and that all customers are aware and informed of the support available to them.

3. Partnerships
We will develop a network of partnerships to reach and deliver s upport to vulnerable customers in ways that maximise our impact, consistently across our networks. We will review our partnerships to ensure that they reflect the dynamics of the communities we serve and that they can support whenever we are not best placed to take action.

4. Data
We will strive to gather and maintain up to date and reliable data on our customers through a wide range of appropriate methods. Data will be a key asset in informing and constantly improving our strategy and practical approach to dealing with situations of vulnerability appropriately across our networks.

5. Training
We will provide training and support to our staff, contractors and service partners to ensure that they are well placed to identify situations of vulnerability and to apply the embedded tools and processes we have developed to support our customers. We will also understand the challenges faced by our staff and contractors and put processes in place to support these.

2019/20 Outputs
Consumer vulnerability strategy *(continued)*

Our strategy is continually evolving

Our vulnerability strategy isn't set in stone; on the contrary, it evolves continually to shape our response to the challenges our customers face.

Our focus on ensuring that no customer is left behind in the transition to Net Zero has seen us study future vulnerability trends and engage with expert stakeholders to identify blockers to the adoption of low carbon technologies. These efforts, among others, have highlighted that the transition to a decarbonised and decentralised energy system will significantly increase the variety of customer needs we'll need to satisfy.

Our experience tells us we are not always best placed to deliver on the multi-dimensional needs of those in vulnerable situations, be it permanent or temporary. In preparation for these arising vulnerability trends, we have this year enhanced our approach to partnerships.

In addition, we have commissioned an independent piece of work to look at how customers household bills will be impacted by the transition to a low carbon future and the electrification of heat and transport. Also reviewing the current definitions of fuel poverty and how they may be impacted. These are two of the many ways in which our vulnerability strategy continues to evolve.

What we are most proud of 2019/20

- *Number* **1 DNO** *for Customer Satisfaction*
- **Benchmarked 1st** *against all UK service sectors in the ICS UK Customer Service Index*
- *A total economic value of over* **£24 million** *to customers*
- *Delivered* **£5.78** *value to customers for every* **£1 spent**
- **94.9%** *average PSR satisfaction across all services*
- *Identified obstacles to customers accessing* **Low Carbon technology**
- **99.9%** *PSR customers experienced zero supply interruptions or were restored in 6 hoursy*
- *Over* **1m** *households now on the PSR (31% of customer base)* **– over 150k added this year**
- *Utility Week Customer Care Award –* **Winner**

2019/20 Outputs
Consumer vulnerability strategy *(continued)*

Over the past year we have focused on providing our vulnerable customers industry-leading value. At SPEN we consider our social role as twofold.

On one hand, we have to identify those in situations of vulnerability, clearly understand their needs and deliver support that makes a lasting difference. On the other hand, we have to keep costs low for our customer base and our vulnerable customers in particular. In recognition of our role, we see industry-leading value as the best services for the least impact on our customer's pockets – it's our responsibility to make the most of what customers pay.

Last year we were the first energy network in the UK to develop a social value measurement methodology and consistently apply it to our portfolio of vulnerability initiatives. This allowed us to ensure that the benefit we delivered through each service offered greatly outweighed the costs. Not only did we apply this assessment retrospectively but through our vulnerability service strategy (implemented last year) we now also ensure we pick the services that deliver the greatest value per pound spent from the options available. This consistent approach to social value measurement allows us to ensure our customers are getting industry-leading value.

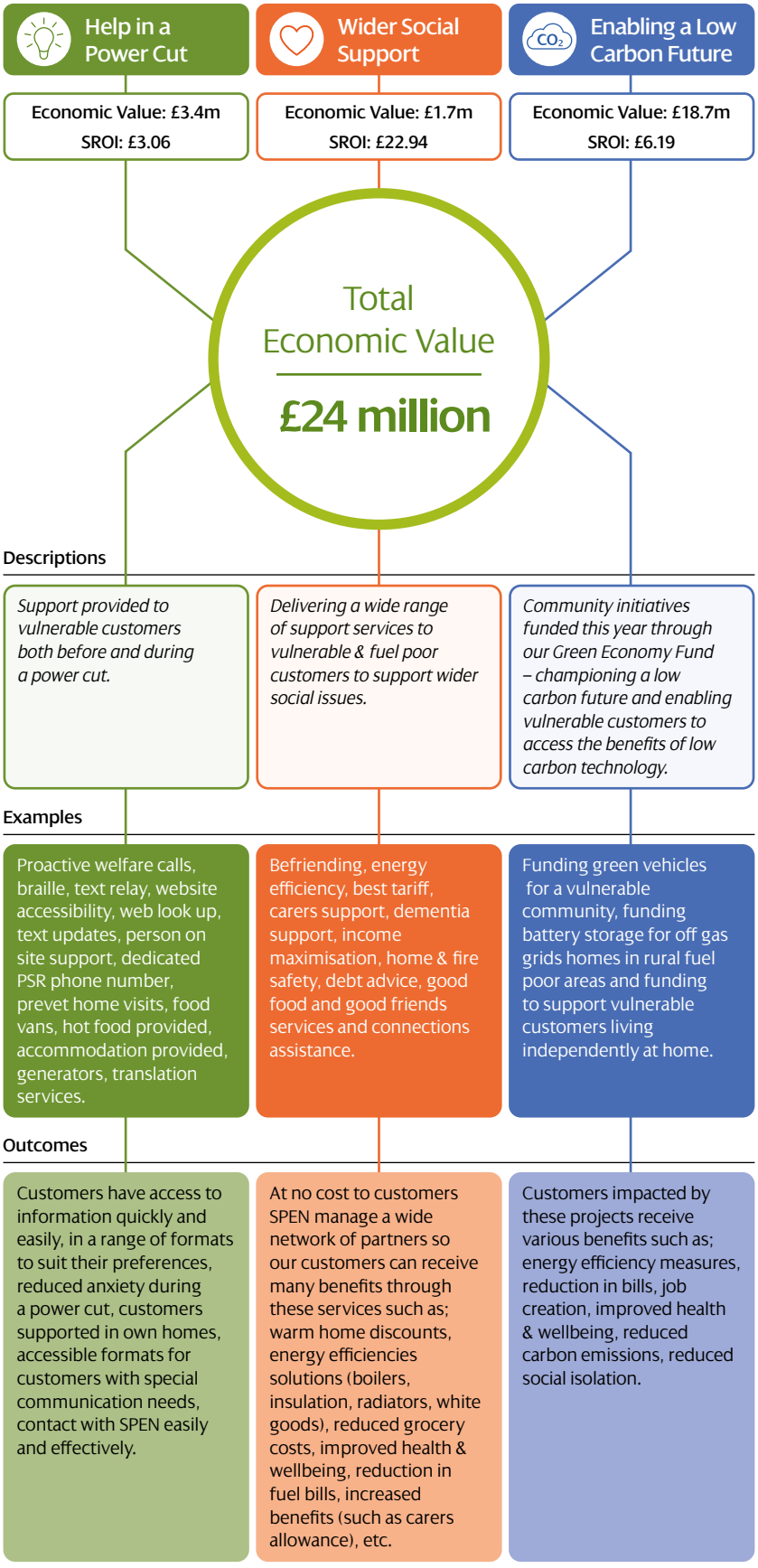
Our social contract

The diagram opposite visualises the value we deliver to our customers through everything we do as a DNO.

We generate value in four ways;

- Helping customers during a power cut
- Delivering wider social support
- Supporting customers towards a low carbon future
- Our emergency response to Covid-19 *(this is laid out separately on page 9)*

At SPEN we regard these four categories of value as the 'social contract' with our customers. This unwritten contract defines our role as an organisation delivering a vital service to society. From keeping the lights on safely and reliably to delivering tailored services that meet the specific needs of those in vulnerable situations, we understand, appreciate and strive to maximise the value we deliver society.



Economic Value = the sum of all benefits minus the sum of all costs.
Social Return on Investment (SROI) = the value to customers for every £1 spent.

Please see www.spenergynetworks.co.uk/userfiles/file/SROI_Summary_SECV_2019-20.pdf for more details.

2019/20 Outputs
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.

Core engagement, such as connections stakeholder panels and in-depth annual surveys, help us to shape our strategic direction, confirming stakeholder priorities and identifying new themes as they emerge.

14 Workshops and panels delivered in 2019/20.

25 Land & Planning Staff Attended Customer Awareness Sessions

80 Staff across our SP Energy Networks licence areas were trained in project management internally

Over **4,000** Customers given the opportunity to engage

210 Organisations given the opportunity to engage.

460,000 Engagement Reach across 13 Agricultural Shows

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 2019/20, 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 2019/20 can be found within our latest ICE plan.

180 Partnership Meetings Held

8.3/10 Monthly Customer Satisfaction score as at March 2020

2 New Forms of Social Media Introduced

Monthly and Annual Survey Results have increased

Provision of Quotations

In 2019/20, we received 15,922 enquiries in SPD and 12,053 in SPM. In SPD, 11,719 quotations were issued and in SPM 9,904 were issued.

In SPD, our average time to quote was 3.3 working days for single premises, and 5.5 days for multiple premises. The corresponding average time to connect was 51.4 days and 64.4 days, from accepted and payment.

In SPM, our average time to quote was 4.6 working days for single premises, and 7.3 days for multiple premises. The corresponding average time to connect was 55.8 days and 73.2 days, from accepted and payment.

41 Local Authorities across SP Energy Networks have been registered in our stakeholder management system (Tractivity) and invited to our ICE engagement events

720 Registered Stakeholders had revised SP Energy Networks ICP/IDNO Customer Journey emailed to them

Members of **11** Local Government Strategic Boards

Annual score for Communication through Delivery of the Project has seen an improvement

Annual Land Rights score has shown an improvement

Substantially ahead of 2019/20 target | On 2019/20 target | Partially or marginally below 2019/20 target | Substantially below 2019/20 target

2019/20 Outputs
Innovation and future networks

Our innovation focus remains firmly centred on our customers and stakeholders, who shape both our Innovation Strategy and innovation project portfolio, helping towards the successful delivery of our RIIO ED1 Business Plan.

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

Our Year of Innovation is now DRIVE

2019 marked the beginning of a drive to strengthen our culture of innovation; we have now transitioned to a longer innovation programme named DRIVE.

This initiative continues to focus on our People!

We have held 8 campaigns, engaging over 1,000 staff members, generating over 250 ideas which have resulted in 50 projects being taken forward to deliver.

In addition to these business focused challenges, we continue to invest in our champions who can drive local innovation and driving initiatives to enable our people managers to be more innovative and deliver a better future quicker.

Distribution Innovation Strategy

SPEN has been actively working with the ENA and contributed to the collective innovation strategy for the GB energy sector which can be viewed at: ENA Electricity Network Innovation Strategy.

We are looking to ensure that our existing and new projects can contribute directly to the following five focus areas in the near-term:

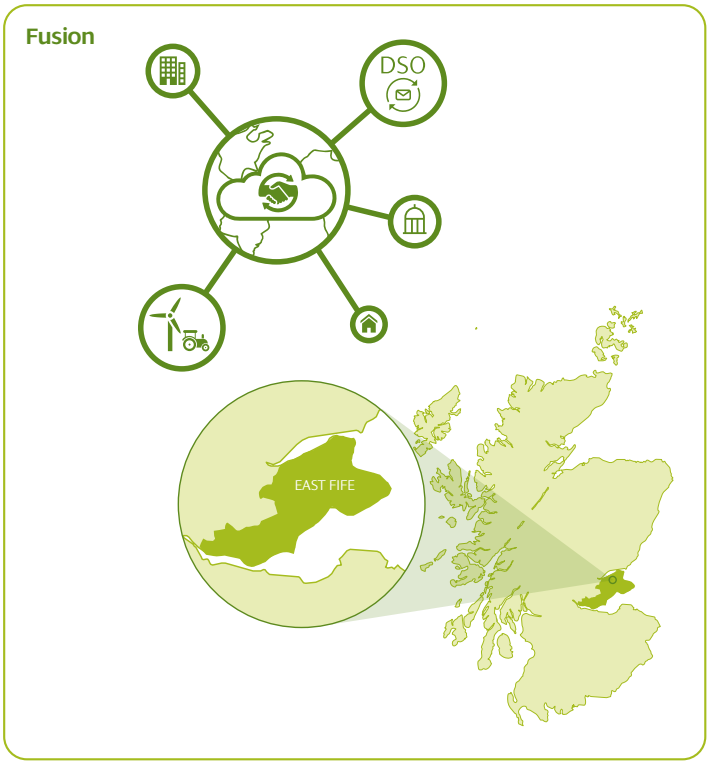
- Facilitate the adoption of flexibility and smart systems
- Facilitate and enable the electrification of heat and transport
- Facilitate the efficient connection of low and zero carbon electricity generation
- Understand the operational impact of long duration reserve services on the network
- Contribute to a UK-wide methodology for calculating the cost of carbon.

Fusion

Our FUSION project is a Distribution System Operator (DSO)-transition project focused on the development and implementation of a structured competitive market trial at a local scale for the trading of commoditised demand side flexibility using the Universal Smart Energy Framework (USEF). This flexibility trial is designed to address network constraint issues found in the distribution network, and to defer network reinforcement.

Project FUSION will harness the value of this commoditised local demand side flexibility in East Fife in Scotland via the introduction of an online trading platform and structured market-based trading framework.

In the past 12 months FUSION has successfully procured its DSO trading platform and has commenced a competitive flexibility tender process which is due to conclude in December 2020 in time for the commencement of live flexibility trading by June 2021.



Substantially ahead of 2019/20 target | On 2019/20 target | Partially or marginally below 2019/20 target | Substantially below 2019/20 target

2019/20 Outputs
Innovation and future networks

Our innovation focus remains firmly centred on our customers and stakeholders, who shape both our Innovation Strategy and innovation project portfolio, helping towards the successful delivery of our RIIO ED1 Business Plan.

LV Engine

Our LV Engine project is a key enabler of a future DSO by bringing flexibility and controllability to LV Networks. Funded by Ofgem's 2017 NIC, this 5-year flagship smart grid project will carry out a globally innovative network trial of Smart Transformers to facilitate the connection of low carbon technologies whilst delivering value for money for our customers. We lead the project in partnership with UK Power Networks and a number of other external partners. We have appointed ERMCO GridBridge as our manufacturing partners and have completed the detailed design of the Smart Transformer, including a Life Cycle Assessment. In parallel, we have identified and are adapting our trial sites for the live demonstration of the LV Engine solution. The project team has also successfully engaged with external stakeholders to reach agreement with LV DC customers to join the trial of the LV Engine project. If successful, LV Engine will demonstrate an alternative approach to conventional network design and operation providing the DSO with a number of tools necessary to operate more intelligently within the LV distribution network.

Network Analyse and View (NAVI)

NAVI is a Low Voltage network modelling tool developed as part of the NCEWS innovation project. This tool was put in small scale live operation last year and since then we have been working with end users to enhance the platform and ensure it continues to meet their requirements and expectations in line with the DSO objectives.

One of our key focuses has been to develop exports of LV circuit data to network analysis tools to allow LV connections designers to automatically generate network models, fully annotated with asset information, to perform power flow analysis instantly without the time-consuming task of manually drawing circuits.

Available Smart Meter data is now starting to be used to identify how customers' energy usage has affected the network, specifically how voltage is distributed across the network. The hope is that this will help identify at-risk networks, specifically, networks with voltage approaching or exceeding their constraint limits.

Smart meter data is also beginning to be used to identify customers' phase. Identification is performed by classifying customers with voltage drop that are in line with one another. Identifying customers phase can also be an indication of imbalanced circuits that may have resulted from electric vehicle charging and/or the use of electric heating. This, in turn, can provide effective network management.

The NAVI low voltage network modelling tool

CHARGE

CHARGE

After successfully being awarded Network Innovation Competition (NIC) funding in 2018 the CHARGE project commenced in 2019. CHARGE aims to accelerate the deployment of public charging infrastructure through three interlinked innovations. The first is the production of a transport model that highlights the likely demand for public charge points from 2020 to 2050 based on travel patterns and EV uptake scenarios. The transport model has been built by our project partner, PTV, and is now ready to be utilised for EV uptake simulations in 2020/21. The second, led by Smarter Grid Solutions, the role and application of 'Smart Charging Connections' has been assessed and site selection has been undertaken for the limited trials in 2020. Lastly, the project will provide a self-service tool, ConnectMore, for customers looking to connect public charge points to the network. ConnectMore will provide customers with access to the transport model results, high granularity network capacity maps and generate their own budget connection quotes, be it through a conventional connection or a Smart Charging Connection. In 2019/20 EA Technology has been focused on fully capturing the user requirements for ConnectMore and developing a list of end user personas that will be at the heart of the design considerations.

Further background

- Network Innovation Allowance Report 19/20
- Innovation strategy

Substantially ahead of 2019/20 target | On 2019/20 target | Partially or marginally below 2019/20 target | Substantially below 2019/20 target

2019/20 Outputs
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 2019/20 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

In 2019/20 SPD & SPM have achieved a combined 55 % reduction in our carbon footprint excluding losses since setting our 15% reduction target in 2013/14. The Business Carbon Footprint graph shows our progress through ED1. This reduction represents a 28% reduction in SPM and a 69% in SPD. Electricity losses (energy lost or stolen from the network as it travels from source to user), is the largest category of our Business Carbon Footprint and also the most influenced by external factors. In comparison to 2018/19 we have reduced our carbon footprint by 24% in SPM and 31% in SPD. We have reduced our buildings energy carbon in comparison to 2018/19 figures by 50% in SPD and 55% in SPM. This is a result of moving to the REGO tariff which provides us with guaranteed zero emission electricity.

Our operational vehicle carbon has reduced by 10% in SPM and 15% in SPD. Our emissions from travel have decreased by 3% in SPM and increased by 1% in SPD. In SPM our SF_6 (Sulphur hexafluoride) emissions have reduced by 13% (from 855 tco_2e to 744 tco_2e and in SPD have increased by 55% (from 124 tco_2e to 194 tco_2e). The increase in SPD is due to recording of assets containing SF_6 removed from service.

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

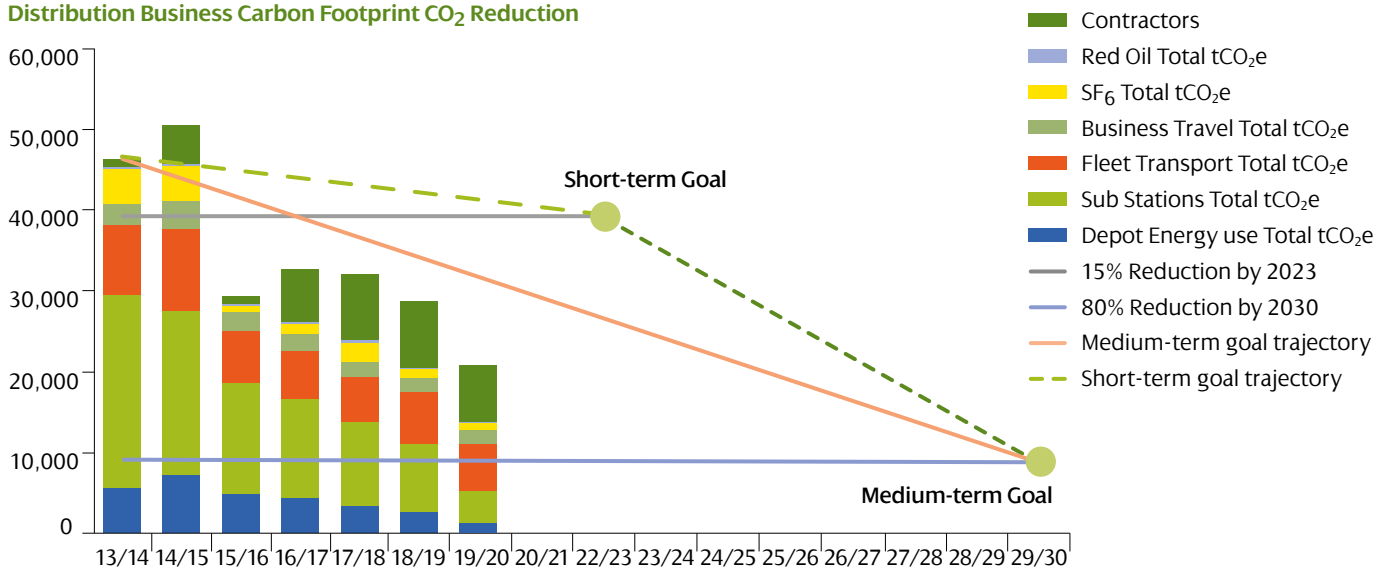
We continue to target measures to reduce the visual impact of our network by removing over head lines from AOB. We are currently behind in our target, which can be attributed to long waits for planning consents in these sensitive areas and the need to minimise adverse effects. This year we removed a further 1.31km of overhead line and installed 1.17km of underground cable in areas of Outstanding National Beauty (ANOB).

Increasing the use of electric vehicles and charging points

In 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. SP Energy networks will be at the forefront of this initiative. In the next 12 to 24 months we will focus our efforts on ensuring we have optimal vehicle charging facilities whilst procuring the most effective vehicles available in the market place.

Snowdonia National Park

Distribution Business Carbon Footprint CO_2 Reduction



Substantially ahead of 2019/20 target | On 2019/20 target | Partially or marginally below 2019/20 target | Substantially below 2019/20 target

2019/20 Outputs
Environment

SPEN and First Glasgow's all-electric commercial bus

SPEN electric vehicle

SPEN staff using new electric bikes

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

In SPD we have 29km of fluid filled cables and topped up 49 litres in the 2019/20 reporting year with a leakage rate of 0.06%. In SPM we have 159km of fluid filled cables and topped up a total of 3230 litres in the 2019/20 reporting year with a leakage rate of 0.46%. 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 a 73% reduction in fluid filled cable top ups.

Monitoring and reducing the energy used within our site portfolio

Energy consumed within our depots and substations is our second biggest emissions contributor after losses, and it is therefore imperative that we work to reduce the energy we consume at our sites. To reduce our carbon emissions from this source, we have amended our tariff to REGO (Renewable Energy Guarantees Origin)'which provides us with guaranteed zero emission electricity. This action has provided a reduction of 55% in SPM and 50% in SPD against 2018/19 representing an overall reduction of 52% in comparison to 2018/19 carbon emissions from energy consumed at our sites. We recognise annual fluctuations in the energy to carbon conversion rate and our move to the REGO tariff allow us a reduction in our carbon footprint, but we must also concentrate on reducing the kWh consumed at our sites. In this reporting year we have installed a modern efficient heating, ventilation and air conditioning system at our depot at Cambuslang. We have reviewed the timer settings for our heating ventilation and air conditioning systems at our depot in Prenton to reduce the times the system is in operation. This year we have included energy used in an additional floor in our HQ in Glasgow. With this addition, our kWh of energy use has slightly increased against our 2018/19kWh. We will continue our programme of replacement and refurbishment of inefficient older buildings to reduce our kWh in future years.

Green Economy Fund

SP Energy Networks £20m Green Economy Fund was established in 2018 to support the Scottish Government's ambitious energy strategy and the UK's drive to a low-carbon economy. We have voluntarily contributed £20m over the last two years through our innovative Green Economy Fund (GEF) to support initiatives which directly benefit the people of Scotland as well as supporting Scotland's ambitious green energy plans and local economic growth. We have funded 36 projects with a wide geographic spread across our network area.

The projects that have been funded through the Green Economy Fund include one of Scotland's most ambitious regeneration projects, Clyde Gateway, which is producing a district heating system that will achieve significant reductions in carbon emissions. The capital investment will secure both project-based and permanent employment, as well as training opportunities. The fund has also supported 18 transport projects – each of which have either installed or purchased new assets focused on the decarbonisation of transport. In partnership with First Bus, we launched Glasgow's first two all-electric vehicles onto a commercial bus route that has existed since the 1960s. These buses will be operating in Glasgow's Low Emission Zone.

Further background

- Environmental report
- Losses strategy – Reducing network energy losses and greenhouse gas emissions

Substantially ahead of 2019/20 target | On 2019/20 target | Partially or marginally below 2019/20 target | Substantially below 2019/20 target

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.

Expenditure and revenues
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 2019/20. In total, and what it implies for our Unrestricted Domestic Tariff Charge:

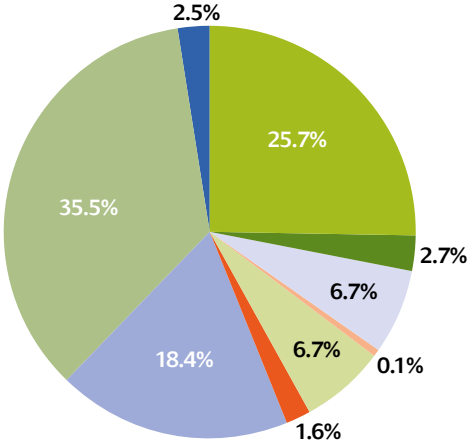
	SPD (£m)	SPM (£m)
Total Allowed Revenue	**418.9**	**370.8**

	SPD (£)	SPM (£)
Unrestricted Domestic Tariff charge	82.34	98.60

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	78.5	78.2
Asset Replacement and Refurbishment	48.1	65.3
Network operating costs	36.8	44.6
Rising lateral mains	8.1	3.9
ESQCR low ground clearances	13.9	15.6
General reinforcement	18.3	11.4
Non-operational capex	2.6	4.2
Connections	0.5	0.0
Others	5.1	6.0
Total (£m)	**211.9**	**229.2**



Total Expenditure across SPEN (SPD and SPM) (2012/13 prices)

Asset Replacement and Refurbishment	**25.7%**
Rising Lateral Mains	**2.7%**
ESQCR (Low Ground Clearances)	**6.7%**
Connections	**0.1%**
General Reinforcement	**6.7%**
Non-operational Capex	**1.6%**
Network Operating Costs	**18.4%**
Engineering & Corporate Support Activities	**35.5%**
Other	**2.5%**

Expenditure and revenues
Our financial performance

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

In 2019/20, we earned a £16.74m 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	+5.4	+2.3
Customer satisfaction	+3.1	+3.4
Penalty-only schemes		
Incentive on Connections engagement	0	0
Reward-only schemes		
Stakeholder engagement incentive	+0.9	+1.0
Customer vulnerability incentive		
Time-to-connect incentive	+0.6	+0.1
	+10.0	+6.7
Total licensees combined (£m)		**+16.7**

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

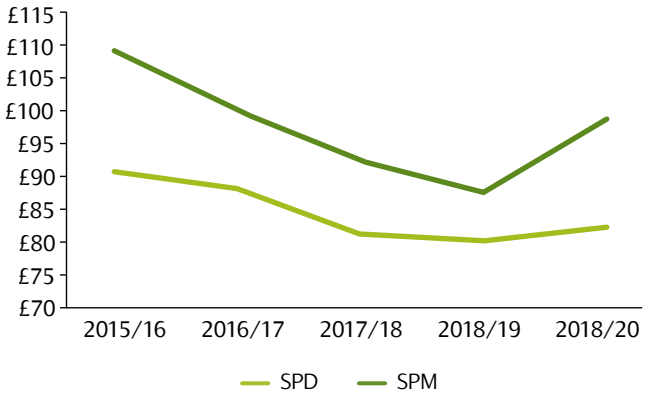
- **Interruptions Incentive** (See pages 33-35 of Ofgem's ED1 Strategy Decision)
- **Customer Satisfaction** (See pages 62-64 of Ofgem's ED1 Strategy Decision)
- **Incentive on Connections Engagement** (See pages 81-82 of Ofgem's ED1 Strategy Decision)
- **Stakeholder Engagement Incentive and Consumer 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)

Expenditure and revenues
Bill impact

The key facts about the make-up of distribution network costs which represent your annual domestic electricity bill in 2019/20.

SPEN's Distribution component of domestic customer bills has fallen by 16% in real terms since the start of the current price control.

SPEN's Distribution component of domestic customer bills (12/13 prices per annum)

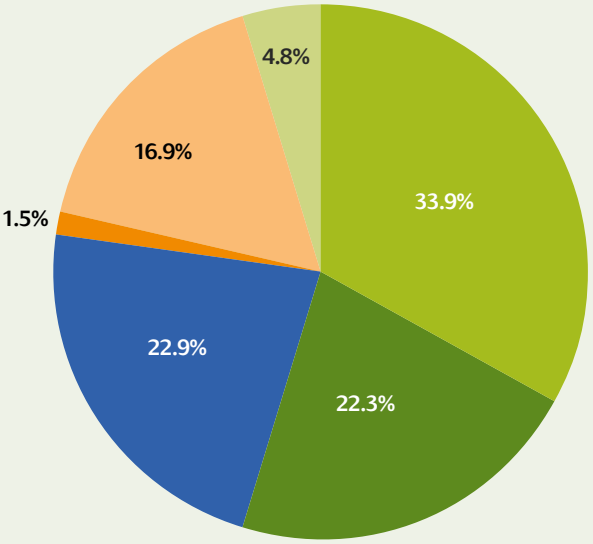


24p per day

SPEN's Distribution component of domestic customer bills is around 24p per day – less than a Netflix subscription and a second class stamp. Average customer bills have also fallen by 10% in real terms since the start of the current price control.

Breakdown of an average electricity bill 2019/20

Electricity bill make up

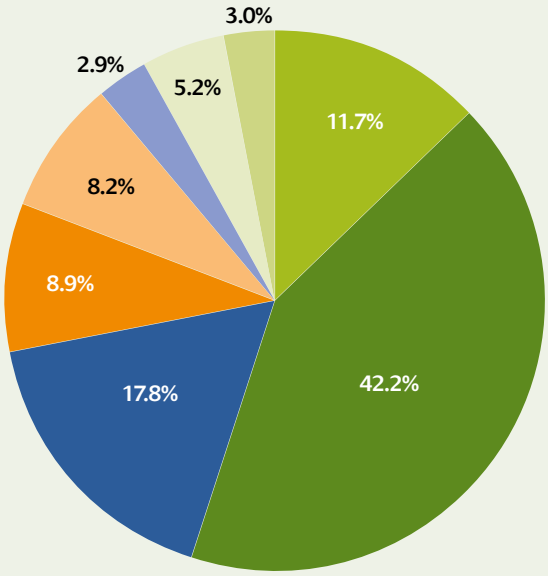


Wholesale costs	33.9%
Network costs (includes Transmission Costs)	22.3%
Environmental and social obligations	22.9%
Other direct costs	1.5%
Operating costs	16.9%
Supplier pre-tax margin	-2.1%
VAT	4.8%

Further Split: 2019/20 Distribution Costs included in 22% opposite

Distribution component of electricity bill

(SPD and SPM Combined 2018/19)



Cost of maintaining the network	11.7%
Future proofing our network	42.2%
Financing	17.8%
Business Rates	8.9%
Legacy Pensions	8.2%
Regulatory Incentives	2.9%
Transmission Charges	5.2%
Other	3.0%

Looking forward

Looking forward
Smart meters

By 2024 energy supply 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

Suppliers have been installing smart meters for several years. However, DNOs were only able to communicate with second generation (SMETS2) smart meters, which have been installed in low volumes since 2017. Next year we expect to be able to connect to a large number of older SMETS1 smart meters through the Smart DCC system. This will increase significantly the number of meters we can retrieve data from. Our Smart Meter Systems team focus on this data to give us more detailed information about the end points 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.

Whilst we have identified benefits in 2019/20, the low values reflect the low volume of customers who have connectable smart meters. During 2019/20, BEIS announced a four-year extension to the Programme, which is now due to conclude by the end of 2024. We expect to see more SMETS2 meters installed next year.

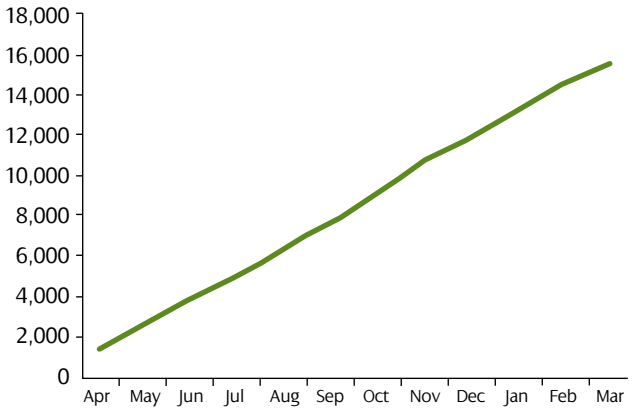
Championing a better customer experience

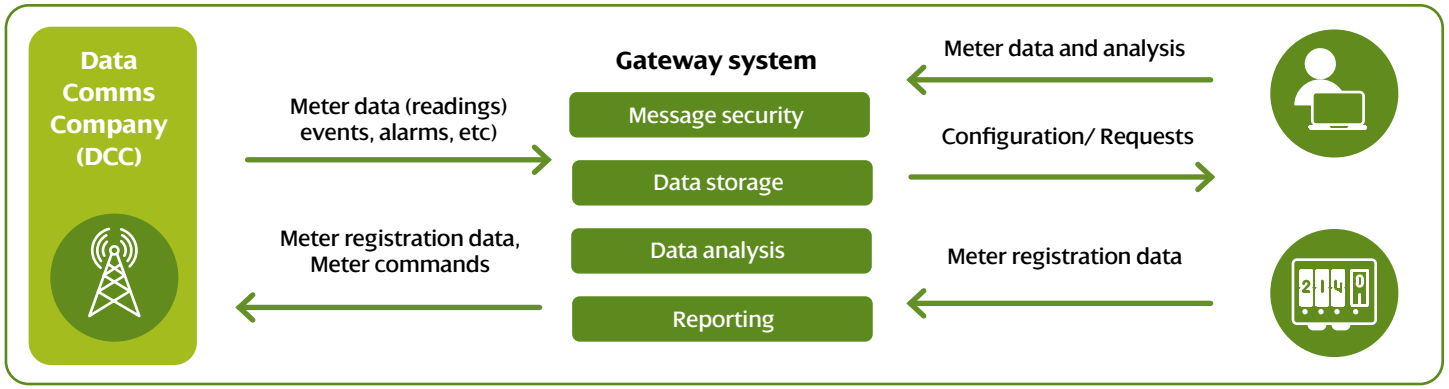
In a number of our customers' properties, we are required to upgrade our assets to enable the fitting of a Smart Meter (or a conventional meter) or to respond to an emergency situation. This activity is known as an intervention. This year we have completed almost 16,000 interventions enabling the roll out of the Smart Metering Programme.

Working with a multi-party team including DNOs, Suppliers, Meter Installers, MOCOPA, BEIS and OFGEM, we have provided further training materials, in animated video format, to allow interventions to be correctly identified (and importantly to stop the incorrect reporting of issues). This improves safety, reduces the number of incorrect reports, prevents abortive meter installations and unnecessary inconvenience for our customers.

We have also worked in partnership with a number of Suppliers to establish a Smart Clinic. This allows Meter Installers to contact our teams directly and arrange an appointment for the customer for both our intervention and for them to return and install the meter on the same day. We are in discussion with other Suppliers to extend this trial.

Intervention rate 2019/20





Looking forward
The distribution system operator

Network companies are key facilitators in increasing productivity by introducing new technologies to support economic growth and increasing the working age population as a result of job creation.

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.

EVs

There is a growing certainty that the rate of uptake and ultimate scale of EVs will have a major impact on electricity networks in the future. This impact 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 Scottish Government's target to remove the need for carbon emitting cars by 2032 and the prediction that EV will become cheaper than traditional vehicles by 2022, we can expect mass uptake of EV in the next decade. To enable the wide scale roll out of EVs, it is key that the UK's electricity networks can facilitate suitable charging infrastructure for customers at a reasonable cost. We anticipate that we need to invest around £300m in each of our electricity network areas in the next decade in order to cope with the increased demand from the electrification of transport – Charging an average domestic EV at home every night would almost double the electricity consumption of the home.

We have been working closely with the Scottish Government, Transport Scotland and Local Authorities to accelerate the uptake of EV charging infrastructure in Scotland and to help meet Scottish Governments EV aspirations.

PACE our joint-funded project between SPEN, SSEN and the Scottish Government, has been focused on providing innovative ways to deliver EV charging infrastructure and is helping us to understand how to integrate charging infrastructure into our grid in a way that not only reduces pressure on the network, but also benefits consumers.

This year we launched our innovative EV UP project, utilising sociodemographic data to better understand where we are likely to experience high EV uptake. This will allow 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, taxi and private hire 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 this transition to EV for smaller vehicles and Hydrogen for buses. We have completed detailed analysis of capacity currently available for EV charging for the 5 Local Authorities in North & Mid Wales leading the transition to EV, specifically targeting areas highlighted for economic growth via tourism and improvement of North-South transport links.

EVs continued

Liverpool City Region are developing Zero Carbon Refuelling Stations to deliver both electric and hydrogen refuelling across the 6 Local Authorities in the LCR Combined Authority. SPEN provided detailed capacity analysis of 38 possible locations for these ZERCs, which was then used during the Local Authority Consultation to determine the 10 viable solutions. Development of the first ZERCs is now underway as the Combined Authority moves closer to the target of zero carbon transport by 2025.

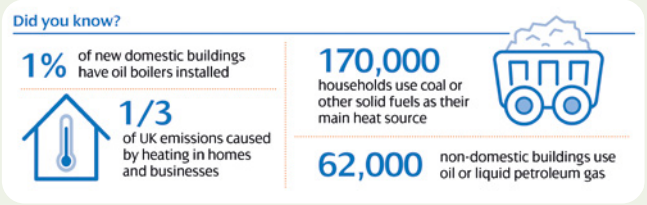
We have also worked closely with Warrington Borough Council to help facilitate their ambitious plans for EV Charging as they developed a new 500 space public car park with EV Charging, and we continue to help plan their further aspirations as the region develops transport plans with the introduction of widespread economic growth from the 100,000 new homes required for the HS2 developments taking place across the Cheshire & Warrington area.

Heat

The complete decarbonisation of heat is also essential by 2050 if the UK's carbon reduction targets are to be achieved. Whilst the UK's strategy is currently considering all possible technologies for this transition under all scenarios electrification of heat has a major role to play and may be the dominant solution. Should this happen it has the potential to place additional demand on networks several times that of customers adopting EVs due to the higher energy requirements of these systems.

As with EVs, facilitating this transition will require major network reinforcement. However, what is currently less certain is the predictability of the uptake of electric heating. As a DNO/DSO, we have to ensure we are prepared to meet this challenge and are capable of deploying this reinforcement efficiently and ahead of customer need. As such, we will remain vigilant on national policies and the uptake of decarbonised heating by our customers.

We have engaged with partners including Scottish Government, Welsh Government and local authorities to explore the possibility of electrification of heat trials. The aim of such trails is primarily to understand the network impact of decarbonised heat and how we can use technology or commercial tools to mitigate that impact, ultimately reducing the cost of achieving Net Zero to our customers.



Looking forward
The distribution system operator

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.

DSO Role

The UK's energy networks have been operating under a traditional model whereby the DNOs deliver electricity in one direction from centralised power plants, to our homes and communities.

Looking forward, the evolution of the energy sector towards a smarter system will only be possible if DNOs play an active coordinating role between all market participants, facilitating markets and services in a neutral and non-discriminatory manner.

This can be achieved by extending the current role of DNOs to that of Distribution System Operators (DSOs). This year we published our updated DSO Strategy, detailing the exact functions, activities and enablers we see as necessary from now through to the end of RIIO-ED2 (2028), to delivering this vital development for the GB electricity system.

A recent report from Baringa estimated that the DNO becoming the DSO will provide best value to customers through the avoidance of up to £3.5bn in costs by 2030 and up to £21bn by 2050. We are already demonstrating benefits of system operator through transport planning, digital substations and artificial intelligence in our Active Network Management (ANM) and sequence switching schemes, as well as our market-making flexibility tenders. Our ANM project in Dumfries and Galloway will help to achieve a reduction in CO_2 emissions of 522k tonnes by 2031 – equivalent to the annual emissions produced from 110,000 diesel/petrol vehicles.

Flexibility

Flexibility refers to the ability to react to the fluctuating needs of the electricity system and is primarily used to reduce peaks on electricity network demand while maintaining security of supply. The flexibility introduced by storage, digitisation and smart devices (including EVs) will not only keep 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 may not always be able to build new assets in time to meet the demands of EVs or heat Pumps.

By agreeing to turn up or down demand or generation 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 that we should be seeking 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 therefore important to be transparent about how that value is calculated.

This year we have successfully concluded our second round of Flexibility tenders seeking 95MW of Flexibility across 10 geographical locations. We have accepted bids from providers to supply 81MW of Flexibility, demonstrating that we are committed to developing and supporting Flexibility markets.

We will also be seeking Flexibility for the entire RIIO ED2 time period, informing our investment plans and laying out our long term Flexibility requirements through to 2028.

Contact us
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

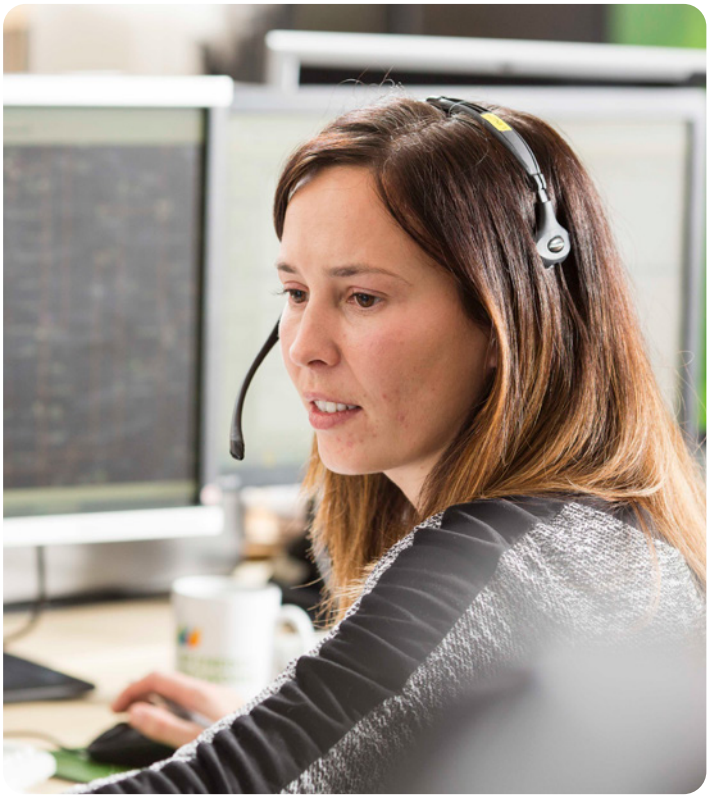
To report a power cut or damage to electricity power lines or substations, call the new national Freephone number – 105.

POWER CUT? CALL 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



Appendix A

Our business plan commitments in full

Appendix A:
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.	A reduction of 93% by March 2020 against our baseline. Still on track to achieve target by 2023.	A reduction of 85% against our baseline by March 2020. Well on track to achieve target by 2023.
★	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 14% and average duration down by 14%. Well on track.	Interruptions down by 6% and average duration down by 16%. Well on track.
●	Improve service to 40% of our poorly served customers.	Improved service to 25%. Well on track for 2023.	Despite initial improvements, Storm Ciara February 2020 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.	0 customers were off supply greater than 36 hours.	2 customers were off supply greater than 36 hours.
●	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.

★ Substantially ahead of 2019/20 target ● On 2019/20 target ● Partially or marginally below 2019/20 target ● Substantially below 2019/20 target

Appendix A:
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.	9.21 seconds average. Zero calls forced disconnected.	11.06 seconds average due to Storm Denis and Storm Ciara. Zero calls forced disconnected.
●	Ensure abandoned calls are less than 1%.	0.71% in Faults and Emergencies.	0.83% in Faults and Emergencies.
●	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.	89.29% of all complaints resolved within 1 day.	89.77% 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.	Improvement of 16.8% with a score of 9.17. Well on track.	Improvement of 16.7% with a score of 9.16. Well on track.
●	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 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.	The volume of smart meters which we can communicate with was expected to accelerate in 2018. This would have allowed us to monitor network load and voltage, enabling us to make improvements to our network for the benefit of our customers. The forecasted increase in Smart Metering installations has not materialised. Accordingly, we have not been able to fully realise the benefits of Smart Metering.	The volume of smart meters which we can communicate with was expected to accelerate in 2018. This would have allowed us to monitor network load and voltage, enabling us to make improvements to our network for the benefit of our customers. The forecasted increase in Smart Metering installations has not materialised. Accordingly, we have not been able to fully realise the benefits of Smart Metering.

★ Substantially ahead of 2019/20 target ● On 2019/20 target ● Partially or marginally below 2019/20 target ● Substantially below 2019/20 target

Appendix A:
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.
●	Contact vulnerable customers every 4 hours during an unplanned outage.	Embedded in standard business process where a customer is confirmed off supply - with flexibility for more frequent contact if needed.
★	Contact all vulnerable customers in advance of planned power interruptions.	Embedded in standard business process to contact by letter and phone – face to face visits targeting 100% Vulnerable Customers ahead of every planned outage.
●	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.	349 staff completed our new Making a Difference Customer Service training this year. This training is a further enhancement to previous years training and aims to empower front line staff to make a difference to customers' experiences.
●	We will continue to establish mechanisms to share information on vulnerable customers with other agencies and authorities.	Data sharing through informed consent in place. 66 partnerships helping shape our strategy, provide delivery of support services to our customers and support customers throughout events.
★	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 a number of 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 establish an additional fund within ScottishPower's existing Energy People Trust to target initiatives to help vulnerable customers.	As part of our ongoing review of our social plan and in conjunction with our stakeholders we have removed this from our plan and have focused our initiatives in areas of greater need.
★	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 66 local partnerships to deliver support services to our customers which delivered a total economic value of £24 million this year.
●	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.

★ Substantially ahead of 2019/20 target ● On 2019/20 target ● Partially or marginally below 2019/20 target ● Substantially below 2019/20 target

Appendix A:
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 420 articles in the press with a reach of 262,255,852. We had 150,323 new registrations this year taking our PSR to 1,070,710, which is 31% of our overall households.
●	We will report our performance against plan and outputs at an annual stakeholder event.	Performance is reported stakeholders several times a year at the Strategic Stakeholder Panels and at annual district updates.
●	We will provide an annual stakeholder communication on our engagement activities and actions.	Annual stakeholder engagement report is provided to Ofgem and key stakeholders, it is 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 publish our diary of events on the SPEN website, allowing stakeholders to register online and view contact details for the direct teams involved.
●	We will further develop our online community to support our stakeholder, customer and employee engagement programmes.	Carried out studies to assess areas of best practice in online communities to further improve the development of our digital engagement platform.
●	We will introduce an annual programme so stakeholders know what engagement to expect.	Embedded business processes for engagement planning both for business as usual and ED2 business planning engagement, supported by our stakeholder database system are providing a robust, multi-layered annual engagement programme. We have rising numbers of internal users on the system, allowing for greater sharing of engagement knowledge.
★	We will embrace stakeholder engagement as 'business as usual' and will build on the approach of more focused and centralised engagement.	Our score has risen from 6.76 in 2019 to 6.85 in 2020 for the Stakeholder Engagement Incentive, also increasing our ranking, placing us second out of all DNOs. This demonstrates our progress year-on-year in an incentive scheme which requires significant annual improvement to maintain score. Recognised as industry leading by external auditors – following robust analysis of our governance, processes and procedures from external accreditor – Accountability, our maturity score has risen to 78%, placing us in the top 10% of companies assessed globally since 2012.

★ Substantially ahead of 2019/20 target ● On 2019/20 target ● Partially or marginally below 2019/20 target ● Substantially below 2019/20 target

Appendix A:
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.	Slight reduction in single premise average from 2.9 to 3.3 days, but improvement in multiple premise from 5.7 to 5.5 days.	Improved our averages for both single premises from 4.8 to 4.6 and multiple premises from 9.6 to 7.4.
●	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.	95.0% contacted within 2 days.	92.2% contacted within 2 days.
●	Engage and proactively work with our customers to meet their preferred completion and 'power on' date.	99.1% of completion dates are as agreed with customer.	99.3% 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 51.4 working days for single premises and 64.4 working days for multiple premises.	Our average time to connect was 55.8 working days for single premises this year compared to 52.8 last year, and 73.2 days for multiple premises compared to 66.6 last year.
●	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.	70.1% of quotes provided within timescales agreed with customer.	70.3% 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.	8th in the DNO league table in Ofgem's 2018/19 Annual Report.	11th in the DNO league table in Ofgem's 2018/19 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.

★ Substantially ahead of 2019/20 target ● On 2019/20 target ● Partially or marginally below 2019/20 target ● Substantially below 2019/20 target

Appendix A:
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.

★ Substantially ahead of 2019/20 target ● On 2019/20 target ● Partially or marginally below 2019/20 target ● Substantially below 2019/20 target

Appendix A:
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.	During 2019/20 SPEN implemented further refinement to our Smart Metering IT application which allows us to connect to the UK's smart metering infrastructure. There was a significant increase in the volume of SMETS2 (smart meter equipment technical specification-customer meter type) installations in 2019/20 from previous years, although still lower than industry forecasts. Mid-year, the installation programme was extended by four years, now due for completion by the end of 2024. The relative volume of SMETS2 smart meters connected to our system remains low, and as a result we still have low volumes of useful data.
●	Connect 4.5GW of Distributed Generation by 2018, with up to 5.5GW of generation connected to our network by 2023.	We have connected 2.07GW in SPD and 2.24GW in SPM providing 4.3GW combined generation 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 to facilitate the connection of low carbon technologies whilst delivering value for money for our customers. In December 2019, we announced our partnership with ERMCO (an electrical and systems service technician company) to further our £8.3m LV Engine innovation project which will finish in 2022.
●	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: www.spenergynetworks.co.uk/pages/connection_opportunities.aspx
●	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 over head lines from AOB. We are currently behind in our target, which can be attributed to long waits for planning consents in these sensitive areas and the need to minimise adverse effects. This year we removed a further 1.31km of overhead line and installed 1.17km of underground cable in ANOB.
●	Install lower transformers to reduce losses by 50% at more than 1,111 of our secondary substations.	In 2019/20 reporting year we have installed 123 lower loss transformers in SPM and 39 lower loss Transformers in SPD. We have replaced a combined SPD and SPM total of 462 transformers during ED1.
★	Reduce our carbon footprint (excluding network losses) by 15% by 2023.	In 2019/20 SPD & SPM have achieved a combined 55 % reduction in our carbon footprint excluding losses since setting our 15% reduction target in 2013/14. This reduction represents a 28% reduction in SPM and a 69% in SPD. Electricity losses (energy lost or stolen from the network as it travels from source to user), is the largest category of 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 8% in SPM and by 25% in SPD.

★ Substantially ahead of 2019/20 target ● On 2019/20 target ● Partially or marginally below 2019/20 target ● Substantially below 2019/20 target

Appendix A:
Environment *(continued)*

	Commitment	Jointly across SPD and SPM this year
●	Monitor and reduce the energy used within our substations, invest in lower carbon buildings and reduce energy use in existing buildings.	To reduce our carbon emissions from this source, we have amended our tariff to REGO (Renewable Energy Guarantees Origin)'which provides us with guaranteed zero emission electricity. This action has provided a reduction of 55% in SPM and 50% in SPD against 2018/19 representing an overall reduction of 52% in comparison to 2018/19 carbon emissions from energy consumed at our sites. We recognise annual fluctuations in the energy to carbon conversion rate and our move to the REGO tariff allow us a reduction in our carbon footprint, but we must also concentrate on reducing the kWh consumed at our sites. We will continue our programme of replacement and refurbishment of inefficient older buildings to reduce our kWh in future years.
●	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 and Network Flexibility and Communications.
★	Increase the use of electric vehicles and charging points.	Since the start of ED1 we have installed 39 vehicle charging points at 18 of our offices. This compliments the introduction of 29 electric vehicles to our fleet of pool cars.
●	Install oil containment around all new and high risk plant containing high volumes of oil.	In SPD during ED1 we have worked on 58 pieces of plant equipment to install oil containment with 8 taking place in the reporting year 2019/20. In SPM during ED1 we have worked on 56 pieces of plant equipment to install oil containment with 12 taking place in the reporting year 2019/20.
●	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 2019/20 we continued to drive the supply chain towards developing equipment with reduced SF_6 leakage rates. 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 1% for all outdoor equipment each year.
★	Reduce oil leaks by 50% through the replacement of poorly performing 132kV cable in SPM.	Since reporting year 2015/16 we have achieved a 76% reduction in fluid filled cable top ups.
●	Engage on the environmental impacts of our developments from a very early stage.	We have a dedicated Environment and 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 29%. This is a result of accurate apportionment between our licenses, travelling less, competitive rail pricing and increased staff awareness of carbon emissions from travel.

★ Substantially ahead of 2019/20 target ● On 2019/20 target ● Partially or marginally below 2019/20 target ● Substantially below 2019/20 target

Appendix A:
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 £14.2m modernising the electricity supply to residents of flats and tenement buildings in 2019/20.
●	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 £35.0m on OH Clearances in 2019/20.
●	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 1,921 items in High Voltage Substations in 2018/19.
●	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 0.27. In 2019/20 we saw an increase in the LTA Rate for staff from 2018/19.
●	Conduct thorough incident investigations, learn lessons quickly and implement changes to make our business safer.	3 Panels of Inquiry were conducted in 2019.
●	Help our contracting teams to reduce their accident rate.	Contractor Lost Time Accident Rate of 0.50. In 2019/20 we saw an increase in the LTA Rate for contractors from 2018/19.
●	Put the 'Health' into Health and Safety – our employees will benefit from a risk based occupational health monitoring programme.	627 employees attended Health Surveillance Monitoring appointments in 2019/20.
●	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.

★ Substantially ahead of 2019/20 target ● On 2019/20 target ● Partially or marginally below 2019/20 target ● Substantially below 2019/20 target

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 moved forward 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 our Adult Craft Apprenticeship for candidates that have joined the business with enhanced skills and maturity. In addition, we have recruited Power Engineering Apprentices and some further Engineers for our conversion programme for Engineers from related industries. This year we have also introduced a new programme for a Higher Skills Apprenticeship in Project Management.

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 84,000 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 24 Apprentices and 31 Trainee Craftspersons to complement our industrial trainee talent pool. We are developing this team to reach multi craftsperson level across all three trade types of Fitting, Jointing and Overhead lines.

Engineering Skills

We provide a consistent level of support in this area. We have attended 7 STEM events and 51 career events, within a mix of High Schools, Universities, Colleges and Primary Schools, both locally & regionally. We have continued to run our new Bright Futures scheme, giving a week's work experience to pupils from areas with second and third generation unemployment. We also continue to support the Year in Industry programme through the Engineering Development Trust. By supporting these organisations we are positively promoting our business, supporting the communities we serve and are providing opportunities for our trainees to develop their interpersonal skills, providing them with a more holistic training programme.

58
events promoting engineering opportunities

55
Industrial trainees recruited

Appendix C

Glossary

Appendix C:

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.

Customer Satisfaction Broader Measure of Customer Satisfaction (BMCS)
This is an industry-wide survey of the views of our customers on our levels of service. It covers customer satisfaction, social obligations, complaint handling and how we engage with our stakeholders. It both rewards and penalises performance against the targets.

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.

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.

Appendix C:

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.

Interruption Incentive Scheme (IIS)
The Interruptions Incentive Scheme (IIS) sets targets for planned and unplanned electricity power cuts. Performance is measured by both number and duration of power cuts. The mechanism both rewards outperformance and penalises underperformance against the targets.

Low-carbon Technology (LCT)
Technologies designed to reduce the amount of carbon we use, including electric vehicles, heat pumps, wind turbines and solar panels.

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 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.

The Time to Quote targets are 8.21 working days for a single property and 11.73 working days for multiple properties.

The Time to Connect targets are 42.08 for a single property and 52.70 working days for multiple properties.

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).

SP ENERGY NETWORKS

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