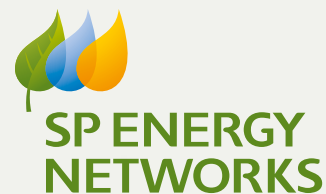


Making a Difference

Part Two: Stakeholder engagement outcomes and impacts



Ofgem Electricity Distribution Stakeholder Engagement and Consumer Vulnerability Incentive Scheme 2019/20



This is Part Two of our submission to Ofgem’s Stakeholder Engagement Incentive for regulatory year 2019/2020.

Ofgem’s annual Stakeholder and Consumer Vulnerability Incentive encourages Distribution Network Operators (DNOs) to: *‘engage proactively with stakeholders in order to anticipate their needs and deliver a consumer focused, socially responsible and sustainable energy service.’*

Contents

Introduction	01
Our Core Engagement Strategy	02
Challenging and Hard-to-Reach Stakeholders	03
Measuring Benefits	03
The Energy System Transition	04
The Race to Net Zero	07
Electric Vehicles and Heat	09
Embedded Projects	10

Our submission is in three parts:

Part One

– Our strategy

Introduces our Stakeholder Engagement and Consumer Vulnerability Strategy, with evidence that we meet Ofgem’s minimum requirements.

Part Two

– Stakeholder engagement outcomes and impacts

Details key outcomes we delivered through stakeholder engagement during this regulatory year and the impacts for our customers and stakeholders.

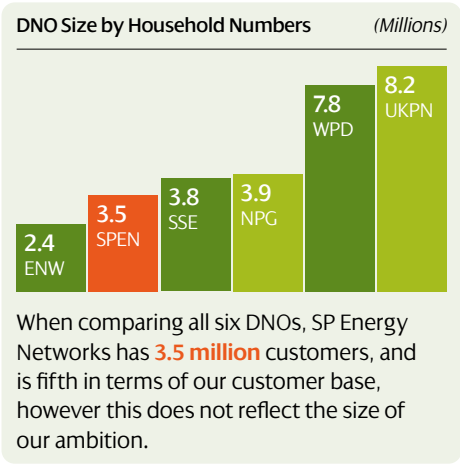
Part Three

– Supporting vulnerable customers

Details key activities we delivered to address consumer vulnerability issues and the outcomes achieved during this regulatory year.

About us

SP Energy Networks is the Distribution Network Operator that delivers electricity to homes and businesses in Central and Southern Scotland, Merseyside, Cheshire, North Wales and North Shropshire. We are the only network operator to work across three countries – Scotland, England, and Wales.



Covid-19

The content of this document details our activities, which took place prior to the Coronavirus outbreak. Future commitments relating to project dates and timelines were correct at the time of writing. Any change to these will be made with direct involvement with our stakeholders based on the assumption dates may change to later in the year/early 2021.

In these unprecedented times and the challenges we are all facing with COVID-19, we are committed to our planned programme of engagement with all our stakeholders, adopting new and innovative solutions ensuring we continue to deliver benefits and value as stakeholder engagement remains central to everything we do.

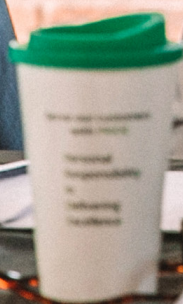


**SP ENERGY
NETWORKS**

Rydyn ni'n gweithio
24 awr y dydd

TABLE
3

SP Energy Networks



Introduction from our CEO, Frank Mitchell

Stakeholder engagement is central to everything we do. We recognise that the only way to deliver the network our customers need is by responding to their ongoing feedback.

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

In recent years, this approach has helped us exceed industry standards and position ourselves as the leading network operator across every part of our operations.

- ✓ **Leader in customer satisfaction**
– No. 1 DNO in 2019/20
- ✓ **Leader in managing network risk**
– engineering excellence
- ✓ **Delivered efficiently on our ED1 commitments**
- ✓ **Leaders in innovation** – secured more innovation funding than any other DNO.

Engaging with stakeholders is a key focus at every level of our business – including the executive team. Their passion for speaking directly to stakeholders is now embedded across all our teams. With a clearly communicated strategy in place, our teams can manage relationships efficiently – seeking engagement and feedback on topics aligned with our overall business strategy. Our internal processes then allow us to be flexible in how we respond to feedback.

Ultimately, good stakeholder engagement is a continual cycle – and we place the utmost emphasis on growing relationships that help us shape our plans and deliver the best possible outcomes for stakeholders, customers, and wider society.

Preparing for the network of the future

The energy landscape is changing fast. The electricity sector is undergoing rapid transformation to meet ambitious carbon reduction targets set by governments. Network companies must act fast. It's important, now more than ever, for customers and stakeholders who pay for these services through electricity bills to have a voice and a say in the future of their network.

Like everything we do, our strategy for this future is shaped by talking to stakeholders – adjusting to meet their needs as we all strive to deliver a greener future together.

*World-leading in stakeholder engagement, ranked in **top 10%** of companies assessed globally*



Top DNO in Broader Measures for Customer Service



Outstanding Project of the Year Award – Green Economy Fund



200,729 Stakeholders engaged in 2019/20



485 recorded engagements in 2019/20



Network of the year 2019 shortlisted for 2020



Over the course of this year, we have engaged over **200,000 stakeholders** through a wide range of events. This level of engagement has resulted in **133 outputs** being put into action this year, contributing to the positive outcomes we are delivering for our customers every day. Please see our full table of outputs at:

www.spenergynetworks.co.uk/outputs

As reported in our previous submission, we carried out extensive research early last year to understand what consumers expect from us as their network operator. This research led to our strategic focus to deliver a **Better Future, Quicker**.

We have focused on the key outcomes within this submission on the activities which are shaping our strategy to deliver a **Better Future, Quicker** at the best value for stakeholders and customers.

Better a sustainable network


We have a critical role to play in driving renewable generation connections and the decarbonisation of heat and transport. Building a sustainable network must be central to everything we do.

Future a resilient network

Ultra-fast communications, the electrification of heat and transport, and increasing generation demands – we need to make sure our communities are ready for the huge changes coming to the network.

Quicker an innovative network

Our goal is to accelerate the changes our stakeholders want to see. We collaborate, innovate and seek new ways to deliver this future vision as soon as we can.

 AccountAbility

Global Leaders
Top 10% in the world

Audited by global leaders in engagement

Again, we enlisted AccountAbility, the leading consultation firm who operate the global standard AA1000SE for stakeholder engagement to review our approach.

This year, we received an impressive score of **78%** (85% is the maximum score achieved by any company), placing us in the **top 10% of companies assessed globally** and in to the highest categorisation phase possible – '**Mature**'.

"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



"Everything we do is shaped by the feedback from our consumers, network users and wider stakeholders. We welcome the insight these groups bring to our business at every level – it helps us define the way we operate."



Frank Mitchell

Chief Executive Officer,
SP Energy Networks

Our Core Stakeholder Engagement Strategy

Within Part One of our submission, we provided a detailed account of our stakeholder engagement strategy. It details the processes we have in place to support all of our teams including the approach we take to governance, planning, identifying stakeholders, methods of engagement and collecting feedback. We have demonstrated how we act on feedback to deliver the best results for our stakeholders and customers.

We have had a Stakeholder Engagement Strategy embedded in our business since 2013. Since then we have continually improved and evolved our strategy to meet the changing needs and requirements of our stakeholders and customers. This has been driven by our learnings, stakeholder input, external accreditation and benchmarking across industries.

It's part of our culture

Our CEO, Frank Mitchell, and his Executive Team have engagement at the top of their agenda. Their passion to deliver the right service for our customers, based on their needs, filters through our whole business.

✓ **196 total engagements carried out by Executive Team**

✓ **133 meetings attended**

✓ **37 panels / workshops / steering groups attended**

✓ **26 presentations / events / key note speeches**

To continually embed our core strategy we:

- Carry out regular internal training sessions
- Communicate activities and outcomes using internal channels
- Make supporting tools available to everyone, e.g. a new toolkit available providing a range of processes and templates for planning and delivering engagement activities
- Include stakeholder engagement into staff induction training and job descriptions.

Key steps of our strategy to deliver

Step 1 Define the purpose

With a clearly defined objective, we can tailor our engagement to deliver the best results. This maximises the value of our efforts, and minimises costs by applying the most effective solution – focusing on value for money.

Step 2 Identify and map stakeholders

Depending on the purpose of the engagement, different individuals will be best placed to offer the insight required. We need to understand: *a) who are the relevant stakeholders* and *b) what is their level of knowledge on the specific topic*.

Step 3 Tailor the engagement

To ensure the maximum value is gained from the event, we tailor three distinct aspects of the engagement: content, method of engagement and communications.

Step 4 Engage

The result of our planning phase is an inclusive, tailored and value for money engagement event, ready to be delivered.

Step 5 Capture feedback

Feedback remains crucial in designing and delivering services that are right for those affected by any area of our business. This year, we have built on the foundation of our approach to data and the suggested content of feedback to collect, and the means with which our users can record it.

Step 6 Determine wants and needs

Analysing feedback to determine needs and services that could be improved, or potential for improving resources, focusing the actions on areas of business change that customers and stakeholders care most about, demonstrating authentic engagement.

Step 7 Develop priorities and actions

We aim to provide value for money – a principle that lies at the heart of everything the business delivers. Demonstrating value rests on our ability to measure potential outputs and prioritise accordingly.

Step 8 Act

Each step, from capturing feedback, determining wants and needs, and developing actions that will make the services we offer better.

Step 9 Close feedback loop

With our engagement complete, our feedback collected and our actions taken, the final step of approach is to close the feedback loop. This step consists of measuring the success of actions taken, identifying how we can improve our engagement approach and providing progress reports to our stakeholders.

This year we have delivered 133 outcomes for our customers across all of our topics.

We go a step beyond and measure the economic value of the benefits we deliver (see measurement tool on page 3).

Strategic management to deliver excellent engagement

Our outputs and goals are always aligned to our core strategy to deliver a 'Better Future, Quicker'. Everything we do and deliver comes back to our pillars and our strategic plans set out in each. We engage with focus and purpose to deliver a service that stakeholders and customers both need and want.

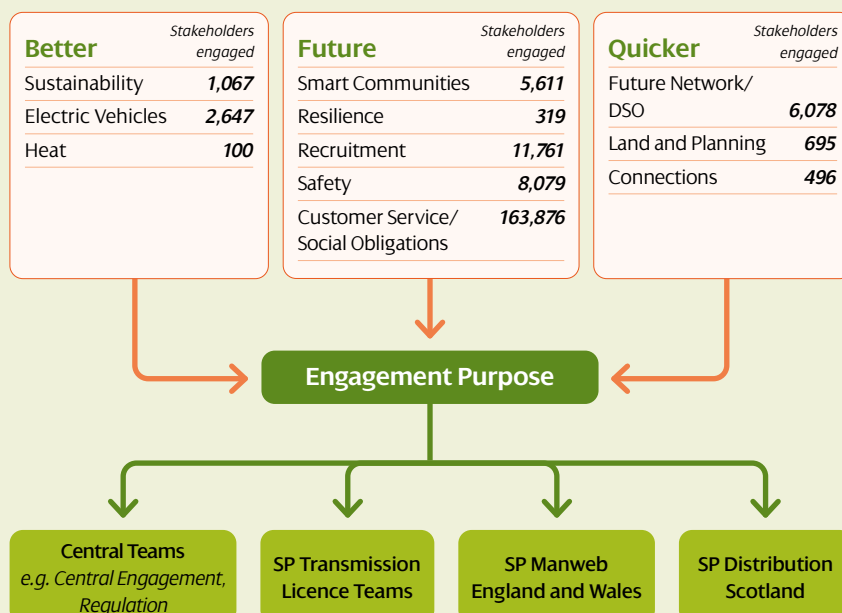
We engage with the right stakeholders, on the right topics, with the right level of expertise to best help us shape our plans.

To do this, we:

- Have 11 strategic engagement plans for our 'Business as Usual' topics with a Senior Management team owner. (For further detail, see Part One).
- Categorise our stakeholders by knowledge level across these topic areas.

This method of segmentation provides greater insight relating to our stakeholders from a central source, allowing us to tailor our engagement activity and easily identify gaps in our engagement.

Senior Team owners are responsible for regular cross-team meetings and brainstorming sessions for engagement planning and stakeholder mapping to drive the plans forward consistently.



Challenging and hard-to-reach stakeholders

As outlined in our Part One submission, identifying and prioritising a broad and inclusive range of stakeholders is very important to us.

We put measures in place to ensure our teams are committed to creating and maintaining relationships with hard-to-reach stakeholders and deliver real benefits.

Our engagement approaches are then translated into tangible actions to ensure we are delivering initiatives that address the needs and wants of challenging and hard-to-reach groups across every aspect of our business.



Throughout our Part Two submission, we have used our challenging and hard-to-reach icon to clearly highlight projects and initiatives which deliver real benefits for harder to reach groups.

Our approaches in action:

1 Regularly reviewing our relationships with stakeholders to identify potential new partnerships, adding value and informing our approach.

The Sustainability team engaged with Scottish National Heritage, SEPA and Scottish Government to consider other stakeholders suitable for our working group. As a result the Sustainable Scotland Network were identified as a missing contingent and invited to participate in our quarterly working group.

2 Utilising our strong links with key stakeholders who represent the voice of large hard-to-reach groups.

Through our relationship with CALA Homes, we have established a new stakeholder group with Homes for Scotland and its members, extending our engagement and reach to a wider audience of house builders addressing utility challenges for the future.

3 Seeking alternative perspectives from challenging and hard-to-reach groups.

We held an 'Understanding SPEN' workshop with a group of customers from varying demographics, as well as future bill-payers. With the changing energy landscape, we need to be able to present often complex information in an easy to understand way. This interactive workshop provided insight and feedback on how we best engage and communicate with our customers both now and in the future.

4 Tailoring our engagement methods to target hard-to-reach groups.

Recognising stakeholders have differing engagement requirements, we have invested £50k to create a Zero Carbon Communities Online hub to offer tailored, local advice. More information on this initiative can be found on page 8.

Measuring benefits

Everything we do as a business is funded by our customers – that's why it's crucial we strive to provide value in everything we do. We have made it a priority to find an accurate and credible way to measure value beyond the financial and track the social benefits of our investments.

We are the **first DNO** to consistently apply a Social Return on Investment (SROI) methodology. It provides a level of insight into the value of our activities like never before.

We are leading the industry with this tool and engaging with other DNOs and Ofgem to consider this as a joint shared value approach to deliver insight and consistency.

What it helps us achieve

Recognising that Willingness to Pay alone is not enough, greater insight is achieved by using information from a number of different sources and collating evidence collected from stakeholders and partners and proxy data from respected resources like HSE and Government bodies, such as the Welsh Government and HM Treasury.

The tool uses our Willingness to Pay studies when proxies are not available. To make sure we're using up-to-date statistics, our proxies are updated annually.

The tool allows us to:

- Quantify and forecast the costs and benefits of projects over time
- Demonstrate the net benefit created for customers by every pound we spend on a service
- Prioritise projects with a greater social return on investment
- Justify projects with a positive social return on investment

By using this tool, we can justify the decisions we make based on stakeholder feedback. We use the tool in two ways:

1. Before we start a project

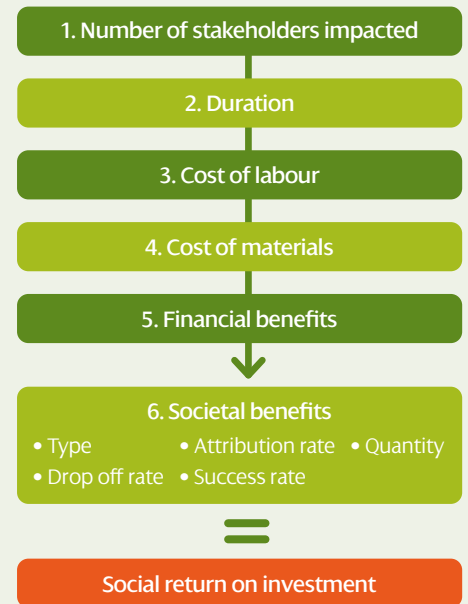
We input the details of the project and compare them against alternative solutions to see which will deliver the greatest social value to customers.

2. After we finish a project

We can see the value the project has generated, we then know what is viable to take forward, scale up or discontinue.

How the tool works

Our SROI tool is an intuitive system that allows users to compare up to four projects in a step-by-step approach using a simple range of inputs.



Outputs

Net Present Value (NPV): The sum of all costs and benefits for the project. There are three ways to calculate NPV:

1. *NPV – Financial: Sum of financial costs and benefits.*
2. *NPSV – Social: Net Present Social Value is the sum of financial costs and social benefits.*
3. *NPV – Total: Sum of all inputs - financial costs, financial benefits, and social benefits. This gives a comprehensive view of the value of the project.*

Payback period: How long project needs to run before it will break even.

Value per stakeholder: This shows value created by the project for each stakeholder impacted.

The SROI: The Social Return on Investment (SROI) is a measure of how much net benefit an initiative delivers for society above and beyond what it costs us to deliver it.

SROI in action

In the example below you can see how we used the tool to calculate the Social Return on Investment for our Active Network Management project in Dumfries and Galloway outlined on [page 6](#).

Active Network Management Scheme at Dumfries and Galloway

Inputs

Project costs	Labour and materials spread across duration of project: £14.5m
Financial benefits	Reduced system imbalance: £2.2m Future avoided expenditure: £6m
Societal benefits	Carbon savings: 521,717 tonnes of CO ₂ avoided Estimated benefit to existing Distributed Generation of reduced constraints: £7.4m in period to 2030/2031 Local economic benefit: £1.5m in period to 2030/2031

*Willingness to Pay values included for providing a smarter, more flexible network, engaging with local stakeholders and providing quicker and easier connections.

Outputs

SROI – Over its first year, we estimate that this project has already generated a **net benefit of £5.38** for every pound we have spent
Over the next 15 years, we expect that this initiative will deliver a:
Total Economic Value of £168m

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.

View a summary of our SROI calculations at:
www.spenergynetworks.co.uk/sroisummary

The following pages use icons to signpost the progress and focus of our projects:



Planned Phase



Developing Stage



Embedded Initiative



Areas where we are pioneering/demonstrating best practice/replicable



Hard-to-reach and challenging groups



Measuring benefits

The Energy System Transition

“Our energy system is undergoing a rapid transformation. Consumers no longer rely solely on centralised energy generation to meet their electricity demands, taking greater control over how they generate and use electricity.

We are seeing increasing volumes of smaller, distributed generation and low carbon technologies such as electric vehicles being connected to our network. With these significant changes to supply and demand, we must act fast. We will play a key role in the radical transformation that lies ahead. We are taking the lead in the creation of an innovative energy network. Feedback from our stakeholders is driving and informing our transition to a DSO (Distribution System Operator.)

We are transforming the network with products and solutions that we believe will be adopted across the industry. This is not just a concept, we're already delivering a smarter, more efficient network for our customers.

We continue to carry out extensive research to understand how our customer behaviours are evolving, and the impact that this will have on the network.

We are implementing smarter alternative ways to manage the existing network capacity and the connection of low carbon technologies. This helps maintain security and stability of supply for our customers whilst avoiding the additional investment of network reinforcements.

Through our flexibility tenders we are engaging directly with our customers, working together to avoid the need for costly network reinforcements. This will deliver benefits to all customers through lowering network costs.”



Scott Mathieson
Network Planning &
Regulation Director

Key Outcomes

First DNO to send site-specific pricing signals to flexibility providers



The only DNO to tender for reactive power flexibility



81MW of flexibility services awarded, saving on traditional reinforcement costs

The most ambitious Active Network Management scheme in the UK

Delivering DSO



We are focused on delivering a DSO model with a whole systems approach that delivers the most cost-effective solution for consumers and the network.

We were the **first DNO** to publish a DSO Vision back in 2016 which was developed with input from a broad range of stakeholders including flexibility providers and the Electricity System Operator (ESO) and we have continued to work with them ever since.

How we engaged our stakeholders

Strategic stakeholder panels dedicated to DSO were attended by a diverse group of 30 expert stakeholders including groups representing **hard-to-reach** stakeholders. Some of the stakeholders we engaged included Ofgem, Scottish and Welsh Government, Citizens Advice, National Energy Action, Community Energy Scotland, Universities of Liverpool, Cardiff and Strathclyde.

We continually engage with our stakeholders on our direction and vision to check that it remains valid. This year, we sought feedback on our priorities, how we can extend our reach to more challenging groups and how to best encourage changes in behaviour and increase awareness of flexibility services and benefits.

We held our first DSO Challenge Workshop

26 expert stakeholders were asked how we can encourage greater stakeholder participation in network operation. Stakeholders included energy system academics, senior government policy advisors, technology companies, new home builders and community bodies.

“Thanks to the SP Energy Networks team for inviting me to this session. It was great to be involved in such an important topic that affects all of us.”

Stakeholder, DSO Challenge Workshop



One-to-one meetings with key stakeholders

Including BEIS, Ofgem, Citizens Advice, Scottish Government, suppliers, aggregators, IT consultants and data specialists.

Blogs and webinars

Regular blogs to share knowledge and best practice and regular internal Yammer Q&A sessions to keep our teams up to speed with new developments.



The feedback we received

As DSO can be a difficult topic to understand, stakeholders told us we should provide clear and simple information. This should be shared with the public, to show what the future energy system will look like, including the benefits of providing flexibility services.

We must also be inclusive to ensure everyone in society benefits, and consider the important role that data will play in the future.



The actions we've taken

Changing how we communicate with our stakeholders

In response to feedback that DSO can be difficult to understand, we developed and shared a range of stakeholder material, including three 'day in the life of' videos, explaining how DSO may function in reality in clear, simple language.

In order to reach a wide range of stakeholders, including **hard-to-reach** groups, we use a variety of communication channels.

For more expert stakeholders, we commissioned an 'Energy Networks of the Future Paper' from Regen, which explores regulatory models and industry reform in more detail.

Harnessing the power of data

We have taken a leading role, chairing the ENA Energy Data Working Group, engaging with other DNOs to take an industry wide approach. The first video has now been created for stakeholders, showing the compilation of a Digital Systems Map providing visibility of the Energy System infrastructure and assets, and enabling optimal investment and creation of new markets.

Impacts

DSO activities shared via social media – **56,815** stakeholders reached.



Stakeholders and communities have access to clear information at differing levels of detail, helping them to better understand DSO and its opportunities. This encourages and supports customers increased involvement in the energy system, which can help them to realise cost savings.



Data from ourselves, SSE and SGN has been used to produce an 'all Scotland heat-map' – the first time common data sets have been brought together.



Our digitisation strategy is transparent and accessible to our stakeholders, providing clarity to users about the data services available today and in the future.



Embedding flexibility as business as usual



Given the unprecedented magnitude and impact of the changes needed to deliver Net Zero, we are evolving the way we design, build and operate our network, and implementing new solutions.

To maximise the potential benefits of flexibility services, we are committed to considering this as an alternative to all significant network reinforcements.

We are exploring markets for flexibility with new and existing customers who are able and willing to control how much they generate or can reduce their demand. We are also exploring other planning and operational use cases.

We operate the FUSION innovation project which will enable DNOs and all market actors to unlock the value of local network flexibility in a competitive and transparent manner. See SROI value opposite.

The findings are shared with stakeholders, and with industry trade body, the Energy Networks Association (ENA) and their Open Networks Project to inform the industry changes they are progressing.



How we engaged our stakeholders

Flexibility Service Requirements

- Published invitation to tenders and requirements using dedicated web pages and the Picoflex platform
- Hosted two webinars for our October tender reaching 41 providers
- Promoted on social media channels to extend our reach.

Valuation of Flexibility Services

- Published current pricing methodology on our website
- Joint lead with Electricity North West on Valuation Methodology as part of Open Networks Project
- Engaged with Ofgem and BEIS to present our Flexibility Valuation method.

General

- Presented at the Power Response conference
- Hosted Open Networks conference at our HQ
- Held joint workshops with third party suppliers such as PassivSystems, Origami and ADE
- Opened Expression of Interest (Eoi) for current market and providers
- Consultation on USEF – exploring concepts to meet GB requirements. We held dedicated information events in Glasgow and London for **70 stakeholders**
- Stakeholder event for over **30 local stakeholders** in St Andrews to offer information and drive participation in project trials, facilitating a local flexibility marketplace.

The feedback we received

Stakeholders told us that they want:

- Longer tender periods
- A common experience across all DNOs
- To understand value of the tenders and how we identify sites for flexibility
- Visibility of the contractual terms and conditions
- Some stakeholders want short contracts. Others want long contracts.
- Ability to bid with sites that are not yet operational
- Flexibility markets expanded and its potential explored
- Clear measures to address any conflicts of interest

The actions we've taken

- Increased tender window from two months to three months.
- The **first DNO** to publish site specific service rates as part of our October tender. This is a best in class outcome.
- Currently preparing a document to explain the criteria and processes we use to identify reinforcement projects we seek flexibility services for. We will publish this and seek stakeholder feedback.
- We provide an Invitation to Tender Pack for each tender round including full terms and conditions.
- Tendered for a range of contract lengths and allow bidders to bid for individual service windows.
- Allowed bids from sites in development or from providers where site details aren't yet finalised, thereby encouraging new entrants to take part.
- Participated in the Open Networks project to create a common flexibility service.
- Working with WPD, SSEN and NPG on the Flexible Power platform, allowing flexibility service providers an interface to interact with the DSO to administer the service.
- The **only DNO** to tender for reactive power flexibility services. This represents a large untapped market as most generators are built with reactive power capability that is often unused.
- 24MW of flexibility service used to provide network security whilst we replaced a double tower 132kV circuit. This is another market use, in addition to most of industry's focus on simply using flexibility to avoid reinforcement.



Supporting Community DSO Projects



We are also engaging and supporting a number of community projects which directly impact our challenging and **hard-to-reach** stakeholder groups. These projects will support the delivery of DSO functions in rural, impoverished and in some areas, off-gas grid networks. Projects such as:

- The National Energy Research and Demonstrator (NERD) Project in East Ayrshire
- Energy Local Bethesda participation in project trials, facilitating a local flexibility marketplace.

*For every £1 spent = £6.14
expected societal benefits over 10 years for
Energy Local Project, Bethesda*



*For every £1 spent = £12.10
expected societal benefits over
10 years for Project Fusion*



Impacts

A record 1.2GW of services registered to provide service requirements – over ten times our requirement. By receiving a record number of commercially viable bids, we are promoting a competitive services market for our customers.



Customers and stakeholders bidding for services, now have a choice of the length of contract and service of their choice.



Constraint management will be trialled, alleviating local network congestion avoiding costly and time consuming network reinforcement – saving money on customer bills.



Customers empowered to commoditise their flexibility thanks to new routes to market for existing and emerging flexibility providers in the distribution network.



Building a competitive and liquid flexibility services market and managing the network at a lower cost to customers.



The first integrated active network management scheme of its kind in the UK



Dumfries and Galloway has among the UK's highest proportion of connected renewable generation relative to its demand. This can present difficulties when it comes to exporting renewable energy back to the electricity grid and connecting new projects.

Currently, 500MW of distributed generation is connected in the area, while more than 400MW of additional distributed generation are contracted to connect in the future.

To address this, we have implemented a revolutionary, wide-scale integrated network management scheme – **the first of its kind in the UK.**

Through a joined up approach for Distribution and Transmission, the project manages transmission network constraints by using Active Network Management (ANM) to manage exports from distributed generation on our network. This means there are fewer constraints for existing distributed energy resources, and enables the connection of new ones. By improving access to a heavily congested part of the network, we are directly supporting the move to a smarter flexible network.

How we engaged our stakeholders

We wanted to keep stakeholders informed and educated on the project and its potential benefits.

- We held two Stakeholder Panels attended by over **40 stakeholders**. We presented the ambitions of the project and how it will benefit our customers. These sessions drew unprecedented interest and have led to us to making these regular events in our annual engagement programme.
- Having selected five potential sites that could benefit from a quicker and cheaper connection, we are now engaging bi-laterally with these customers.
- We hold quarterly meetings with existing customers connected to the system.

The feedback we received

Stakeholders told us:

- They were keen to understand more about the project and its benefits and project timelines.
- They wanted constraint analysis for existing sites.
- They wanted updates from other areas of our business.

The actions we've taken

- Provided connected customers and future customers with project specific constraint analysis, including how this could affect current contracts with National Grid.
- Awarded tender for technical solution with the aim of installing and commissioning control in 2020.
- Ensured our Transmission colleagues are involved in engagement events to provide extra level of knowledge and expertise for our stakeholders.

Impacts

- Improved visibility of benefits and costs will enable potential ANM to make more informed decisions. ✓
- By involving Transmission colleagues at our engagement events, we can provide information regarding their assets and the benefits of our ability to work in collaboration. ✓
- Greater opportunity for new and existing ANM customers to get quicker, cheaper and more effective access to distribution network, lowering costs for customers and empowering local communities. ✓
- Improved service for all of our customers by reducing network constraints. ✓
- Facilitating more zero carbon generation connected to the network. This delivers **£40m benefits** to customers and a reduction of 522k tonnes of CO₂. This is a best in class outcome. ✓
- Utilise existing network assets more efficiently, reducing costs for all of our customers. ✓
- The ANM solution technology will be rolled out in phases across our entire network in the next two years. ✓

For every £1 spent = £10.76

expected societal benefits over 10 years for the ANM Dumfries & Galloway Project



Increasing network visibility



Developing a greater understanding of our existing network at a more granular level will allow us to operate more efficiently as a Distribution System Operator (DSO).

The Low Voltage (LV) network is quickly becoming one of the most important and rapidly changing parts of the network and will be a key area to be impacted by the electrification of heat and transport.

We've undertaken research and analysis into the changing behaviours of our customers in the future and the associated network impact.

How we engaged our stakeholders

We engaged with stakeholders from different sectors including industry, consumer groups, and technical and digital specialists through regular one-to-one meetings, workshops, and industry events.

We have engaged with expert-level stakeholders who understand the technical challenges we face in facilitating current and future customer needs.

The feedback we received

Feedback from our engagement activities has been clear and consistent, with stakeholders telling us:

- To use technology to shape our approach
- To learn from other industries
- To use modelling to prepare ourselves and our customers for the future.

The key way for us to answer this feedback is to increase our visibility of the network.

The actions we've taken

To improve network visibility, we have:

- Pioneered software that applies data science and machine learning algorithms to predict network demand and generation.
- Installed first LV monitor devices to collect data and identify faults within minutes. Held the first four-week trial of 40 devices. Based on the learnings, we are now rolling out a further 300 monitors. See SROI value below.
- Introduced the Network Analyse and View (NAVI) tool, developed for LV network modelling. Trials have taken place across Ayrshire & Clyde and Merseyside.
- Introduced Artificial Intelligence Recognition technology via a smart phone app to crowdsource asset data – this will allow us to update our systems more regularly.
- Launched trials of the world's only technology that can spot real-time fault current levels in the network using Real-Time Fault Level Monitors.

Impacts

- Knowing about network congestion in advance allows prompt operational action, maintaining customer supply with less interruption and power outages. ✓
- Accelerated connections at a lower price for customers, combined with flexible connection options. ✓
- Our LV monitors project demonstrated a **£60,000 saving in the first trial**. This project will ultimately maximise future cost savings for our customers. ✓
- The introduction of Artificial Intelligence Technology will give us a picture of network assets and allow us to maximise capability whilst maintaining security and stability of supply for our customers. ✓
- Our real-time fault level monitors will facilitate a higher uptake of renewable generation and are predicted to provide industry savings of £5m per year, and huge potential savings if rolled out nationally, ultimately creating cost savings for customers. ✓

For every £1 spent = £14.02

expected societal benefits over 10 years for LV Monitor 2020 rollout



"This NAVI tool is a game-changer. Allowing us to quickly model a network that's growing increasingly complex, and will ultimately decrease the length of time it takes to issue a connection offer to a customer, thus improving customer service."

Neil Woodcock, Head of Planning and Design in Merseyside



The Race to Net Zero – working with our stakeholders to fight climate change

“In 2019, the UK made a legally binding commitment to a zero carbon future, legislating a deadline for its contribution to global warming by 2050. Across our network areas, the Net Zero targets are even more ambitious.

We are ready to facilitate these Government targets and we understand the value of engaging with our stakeholders and customers on the journey to Net Zero. Each community is unique in that journey, one national plan will not address the needs of all. We must be responsive to local communities and with our experience, we are confident that we can prepare for the future.”



Guy Jefferson
Customer Service
Director

Key Outcomes

First in the UK to launch a 'Zero Carbon Communities' initiative



£20m investment in Glasgow to support local energy planning

Published a report on the future of Community Energy forecasting a possible £1.8bn economy boost

Embedded an engineer within the Liverpool City Region Authority Metropolitan Mayor's team to assist with strategic planning of public EV chargers within Merseyside area



Our 'Zero Carbon Communities' (ZCC) initiative



This is the first initiative of its kind in the UK. ZCC sets out a detailed roadmap in each of the regions we operate to show local communities how they can play their part. The initiative aims to help and guide them along the path to Net Zero. To ensure no one is left behind in the energy decentralisation transition, we are engaging with all of our communities including those hard-to-reach and more challenging stakeholder groups.

Please see a full copy of our Zero Carbon Communities Initiative at:
www.spenergynetworks.co.uk/zcc

How we engaged our stakeholders

We have developed a number of strategic partnerships with community energy schemes and energy innovation projects with a consortium of partners, and again strengthened our partnerships with our local and devolved governments across the UK.

Our stakeholder relationships cross over multiple levels, from CEO and Executive Team to our District Delivery Teams.

Engagement through multiple channels

- Board meetings and steering groups with City Region Combined Authority, City Councils, Local Enterprise Partnerships and other local authorities to understand planning projects as early as possible.
- Community meetings (including community energy projects).

Raising awareness and extending our reach

- Hosted a debate on the race to Net Zero carbon emissions in Glasgow, with top energy experts, policymakers and influencers across government and Ofgem – as well as business leaders from some of Scotland's most innovative green projects.
- Held a launch event for the ZCC initiative in Liverpool, as we are already engaging and working on activities to facilitate the Liverpool City Region Authority Metro Mayor's aspirations for Net Zero by 2040.
- Headline sponsor of at Smarter Tomorrow Conference to raise profile of campaign.

Stakeholder panels

Held two strategic stakeholder panels dedicated to the topic of smart communities across Scotland, England and Wales – with over 30 stakeholders.

The feedback we received

Stakeholders told us to:

- Continue to engage with key decision makers in both cities and rural areas
- Communicate benefits of smarter communities and the potential cost savings
- Share information in a simple manner
- Understand your communities on an individual basis as they all have different plans and different local targets.

The actions we've taken

Sharing the data behind Zero Carbon Communities

We commissioned a report by Capital Economics, providing us with data we need to meet the 'rapid' pace of decarbonisation including the number of EV chargers and heat pump installations required.

Working with our Communities

Edinburgh

- Working with Council on rollout of 64 charging stations inclusive of rapid, fast and trickle charging across 14 locations.
- Working on second pilot for lampposts to be used for city centre dwelling EV charging.
- Engaging on wider plans for investment of over £1.3b over 15 years and plans for 41,000 new homes.
- Engaging on solutions to reduce carbon emissions generated by festivals and markets to achieve low-carbon targets.

Glasgow

- Investing £20m of network upgrades to support long-term regeneration plans.
- Working with City Council to deliver public charging points for electric vehicles.
- Working with University of Glasgow on Riverside Innovation District, to facilitate extensive investment in area.
- Through our COP26 working groups, we are in plans for new developments at Glasgow Airport.

Liverpool

- Setting up the Baltic Triangle Demonstrator Project as hub of technology and innovation.
- Supporting Zero Emissions Refueling Centres, provided feasibility studies for 38 locations optimum locations for combined hydrogen and electric refuelling hubs.
- Building a network of EV charging points at commuter train stations.
- Setting aside funding for programmes that incentivise the adoption of EVs.
- Feasibility studies and analysis for development projects across Liverpool Waterfront.
- Providing network analysis for six local authorities to prepare for electrification of their transport network.
- Informing local EV strategies to support any local Clean Air Strategies.

Wales

- Working with the Welsh Government, Menter Mon and MSparc to develop a concept for a hydrogen island on Anglesey.
- Through our partnership with Morlais Energy, Stena Ports and Hydrogen Cymru we are investigating a Holyhead Refuelling Station using tidal generation instead of transporting to the mainland.
- Providing new options for Anglesey Energy Island Programme to mitigate reinforcement.
- Working with Isle of Anglesey County Council and the Welsh Government to provide analysis for EV Charging Stations for tourist locations to help boost local rural economy.

Cheshire and Warrington

- Member of the Strategic Infrastructure Board for Cheshire & Warrington LEP, collaborating with Cadent Gas and other partners to deliver benefits to customers and stakeholders.
- Active fault level management trials to inform and enable renewables in South Warrington.
- Supporting major infrastructure development plans to boost economy by £50bn by 2040.
- Working with **hard-to-reach** stakeholders within rural community projects who are in fuel poverty and will be adversely affected in the future as they are off gas grid.
- Working with partners on the REWIRE-NW Project to create designs for a Smart Local Energy System.

For every £1 spent = £12.35

expected societal benefits over 10 years for the REWIRE-NW Project



Rural Communities

We are currently supporting a number of **hard-to-reach** community energy projects.

Hydrogen Cymru – One of the founding members of newly formed Hydrogen Cymru Trade Association, looking at longer term requirements for hydrogen across Wales.

Standhill Farm – provided a grid offer to connect renewable energy generators. This farm has now been able to diversify their income. We are now sharing learnings to inspire more rural communities to discover sustainable energy and how it can generate new sources of income. See more details at: www.spenergynetworks.co.uk/standhillfarm

Ynni Llyn – We are using Active Network Management schemes across the Llyn Peninsula.

Ettick and Yarrow – Community Smart Grid Demonstrator supporting 800 rural homes via our Active Network Management System.

Impacts

8 locations agreed for Zero Emissions Refuelling Stations with 6 local authorities across Liverpool City Region.



Key strategic stakeholders now have access to the information to achieve national and local targets.



Through SMART planning and active management techniques there is potential to reduce network re-enforcement costs resulting in overall savings of over £15 billion.



We are giving a voice to stakeholders seeking greater flexibility to develop their own plans for Net Zero.



By facilitating Glasgow City regeneration plans we will support the build of new homes, and the potential to deliver 29,000 jobs.



By identifying optimal locations for Edinburgh City Council for 64 chargers, we will ensure public access to charge points for both customers and visitors to the city supporting charging of taxis, public transport, park and ride facilities and residential dwellings.



Through our engagement, Glasgow City Council agreed to fund ducting which we will lay as part of our upgrade project mitigating future customer disruption during future installation of broadband, increasing efficiencies on time and cost.



By facilitating the Glasgow Riverside Innovation Project with network capacity we are supporting new major commercial premises and local start up projects whilst improving resilience and service for customers.



Through our partnerships to facilitate these local energy plans, local communities will have a system that works for them with the potential creation of over 115,00 new jobs in the future.



We are facilitating the Liverpool City Region Authority Metro Mayor's aspirations for Net Zero by 2040 for a cleaner, greener future and economic growth.



Working with partners including Cadent Gas on the REWIRE-NW Project in Warrington, helping support 10,000 local residents. The project will create detailed designs for the Smart Local Energy Systems of tomorrow, that will carry the UK forward into the next 100 years or more.



Powering communities online



To support communities as part of our Zero Carbon Communities initiative, we've invested £50k to create a new online hub full of practical links and information on local energy project design through to delivery and ongoing management.



With a central role in the energy sector, we want to proactively support new, existing and **hard-to-reach** Community Energy projects.

We're working with experts in the field to offer a free Zero Carbon Communities online hub, offering tailored local advice, signposting on technical solutions and funding opportunities. It will also have case study examples of communities who are at the forefront of local energy innovation solutions and developing sustainable local energy economies.

For every £1 spent = £13.83

expected societal benefits over 10 years for the Online Community Energy Tool



How we engaged our stakeholders

- We contracted WPI Economics and worked closely with our third sector stakeholders – Community Energy Scotland, Community Energy England and Community Energy Wales – to explore the future of community energy in the UK.
- We used this research to make informed recommendations on the policy and regulatory mechanisms needed.
- We shared our Zero Carbon Communities Report with the Scottish and UK Government as well as local parliamentary representatives. We also published our recommendations and details of our forthcoming Zero Carbon Communities Hub in an article in the Scottish Herald.

The feedback we received

Our stakeholders told us:

- Community schemes need help to get started, learn fast and don't have funding for expensive consultants.
- There is no joined up approach between various parties such as networks and community energy groups, and a lack of visibility of electricity networks.
- They didn't want to develop local energy innovation such as Demand Side Response (DSR) 'in the wrong place'. They want us to take a proactive role in sharing network issues so that communities can help create a financially and technically viable solution.
- It's difficult to find relevant information, such as available connection opportunities, who to speak to, costs and more.

The actions we've taken

- Funding Community Energy Scotland to deliver our 'Community Energy Futures' educational piece.
- Built a digital education platform to provide a desktop process for community projects to check feasibility.
- Our Hub directs users to Community Energy Groups for information on financials and funding requirements. It is our connection that is the catalyst for making sure projects happen. The site provides information with our heat maps showing connection opportunities and case studies sharing lessons learned from successful projects. We are currently running trials of the Hub with Dumfries and Galloway College.

Impacts

A central source of information reduces barriers to entry for customers and stakeholders – helping them move forward with projects quicker.



Provides projects with expert consultancy and details on the best financial options for their technical solution.



Long-term, this tool will lead to more connections and increase community resilience in the case of a black start event or community-level power cuts. It will increase local knowledge of the energy sector transition and open potential opportunities for jobs, the environment, and improves cost-efficiencies in heat and power.



Electric Vehicles and Heat

“The decarbonisation of transport and heat is critical to achieving the county's ambitious targets to achieve Net Zero.

By working closely with our stakeholders, we understand the regional requirements and the challenges across each of our licence areas to support in the best possible way to accelerate local and national planning.”



Jim McOmish
Head of Distribution
Network

Key Outcomes

Established pioneering, Government partnership for decarbonisation of all forms of transport.



EV and Heat working groups established and engagement on rail electrification now underway.

Delivered pilot project for public EV charger sites which could leverage significant carbon and cost benefits.

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.



Delivered first two commercial electric buses in Glasgow City Centre, now operating across areas affected by fuel poverty.

First DNO project in Europe developing an integrated EV transport/network model for an entire licence area.



For every £1 spent = £9.15

expected societal benefits over
10 years for Project PACE



SP Energy Networks and Transport Scotland: the first UK partnership of its kind



We are investing £2m in a groundbreaking £7.5m strategic partnership with Scottish Government and Transport Scotland that will focus on the decarbonisation of all forms of transport.

The first project being delivered by the partnership is **Project PACE**, an innovative trial of a DNO led roll out of EV chargers. The project aims to deliver 200 public EV chargers across North and South Lanarkshire by the end of 2020.

To ensure they are delivered efficiently and effectively, and to make best use of the Transport Scotland funding, a £500k feasibility study, funded by our Green Economy Fund, has been completed to determine optimum locations for electric vehicle charging hubs.

We will install charge points at locations which are not currently viable for commercial businesses, helping to address the needs of consumers who have concerns about public charger availability, supporting an inclusive low carbon transition.

See SROI value below.

How we engaged our stakeholders

We informed Scottish Government and Transport Scotland of the network constraint issues that could potentially affect their overall plans. We shared our learnings and the approach we were taking in Liverpool as the **first DNO** to merge transport modelling with network plans.

The engagement continued for two years, through a variety of methods at different levels:

- At a higher strategic level, one-to-one meetings held by our CEO, Frank Mitchell, SEN and Transport Minister for Scotland.
- Bi-lateral meetings with government representatives, monthly project steering groups and regular stakeholder workshops.

The feedback we received

We learned that every local authority across Scotland can access funding from the Scottish Government to deliver public EV charge points. However, obstacles such as lack of expert knowledge and funding for feasibility studies made the process difficult, with long lead times and inefficiencies. Stakeholders explained there were inconsistencies in the approach, as well as inefficiencies and in some cases, limited plans to utilise the available funding.

The actions we've taken

This feedback helped us create a solution for the Scottish Government and Transport Scotland.

- We will carry out a pilot trial, taking responsibility for available funding on behalf of our stakeholders to deliver public EV charging infrastructure in areas where the market is not yet delivering.
- Selected two of the largest local authorities in Scotland, due to their diverse range of needs. For example, a good cross section of roads – from trunk roads to motorways, both urban and rural and areas of fuel poverty.

“This partnership highlights the critical role that electricity networks have to play in delivering a zero-carbon energy system and facilitating an electric vehicle revolution and the provision of clean energy for transport.”

Nicola Sturgeon, First Minister of Scotland



Impacts

Consumers will have inclusive and equal access to public charging points.



200 chargers planned to be installed in 2020, servicing 660K customers – an increase of 500% of publicly available chargers in the area and 20% increase across Scotland (based on 2019 public data).



Deployment of public chargers will happen more quickly and efficiently, targeting efficiency of 20% and delivery timescales reduced by 9-12 months on average.



Addressing areas where commercial businesses cannot deliver, ensuring fair and equal accessibility for all.



Partnership being used as example across Iberdrola global business as best practice.



This pilot could set a blueprint for deployment of Public EV charging infrastructure for the rest of the UK and enable scaling up of efficiencies and speed of deployment.



A combined vision for decarbonisation of heat

This strategic partnership has enabled the formation of a working group (with Scottish Government policy makers and SEN) focusing on the decarbonisation of heat in Scotland.

We are already conducting bi-lateral meetings on a bi-monthly basis, looking at how many customers may have to change to heat pumps between now and 2030 and how we can support this and help inform Scottish Government public policy decisions.

Based on the feedback, our first focus is to support properties which are currently 'off gas grid' as these are currently reliant on higher carbon fuels.

Impacts

Sharing information which will help inform new government policies due for release this summer.



Working together to ensure Government ambitions are aligned when shaping future network investment plans.



We have made a call for retail and service partners to collaborate with us for a new heat project bid for Network Innovation Competition funding for a large-scale trials to understand the impact of electrification of heat on the network and how this can be managed and mitigated effectively and efficiently.



Enabling the decarbonisation of vehicles across our entire network and beyond



As the only DNO operating across Scotland, England and Wales, our stakeholders have informed us of the diverse requirements for the decarbonisation of electric vehicles.

We have moved quickly to put ourselves in a leading position to deliver for our stakeholders. We are doing this through multiple initiatives to provide stakeholders and customers with necessary tools to begin their EV charging plans – from public to private use.

How we engaged our stakeholders

We are working with key stakeholders across government, local authorities and local enterprise partnerships at both a strategic and implementation level.

We held events across Scotland, England and Wales led by our senior management and innovation engineering teams. Focused breakout sessions helped us understand how we could develop our business plans and investments to help customers and stakeholders.

- Low Carbon Futures Conferences, Falkirk and Chester – with **193 stakeholders**
- Preparing for EV events, inviting industry experts such as Nissan to present on future innovations, Glasgow and Chester – with **175 stakeholders**
- Green GB week – Electric Vehicle Roadshow, Liverpool over **100 stakeholders**
- Six connection stakeholder panels (north and south) – with over **50 stakeholders**
- 4 Industry Stakeholder workshops – **138 stakeholders** attended
- Stakeholder workshop on EV, Heat and PV – **50 stakeholders** attended
- We are working together with UKPN on our EV projects and sharing learnings.

The feedback we received

A clear message stood out from our stakeholders: people need more information about the increased use of electric vehicles. They need to know what it all means for them, their businesses, and their communities.

The actions we've taken

- **First DNO** project in Europe developing an integrated EV transport/network model for an entire licence area.
- Published a report with Smart Grid Solutions on smart charger solutions trials to take place in 2020.
- Held two events with over **60 expert stakeholders** to map out user requirements for a new online self-assessment tool. The tool will provide an indicative quote and link to our transport model.
- Supported various electric vehicle projects through our engagement on our Green Economy Fund Project. For example, community car clubs, electric buses, e-bikes and more.
- Domestic EV Uptake Modelling Project – collaboration with analytics consultancy, Field Dynamics, allowed us to develop a tool for understanding customers' ability to transition to EVs and where uptake will be. Through this project we can identify additional infrastructure required to be able to charge a vehicle at every residential address in the country.
- Smart charging trials in two major Warrington EV hubs and one workplace at Ellesmere Port.

For every £1 spent = £6.34

expected societal benefits over 10 years for Public EV Transport/Network Model Project



For every £1 spent = £41.42

expected societal benefits over 10 years for Domestic EV Uptake Modelling Project



Impacts

Our data tool allows stakeholders to see the most appropriate areas for their public EV charge points in areas of low congestion on the network and at the best price and therefore a quicker connection. ✓

Our transport modelling shows customer behaviours, including use of bikes, buses and cars at 2000 distinct areas within our licence area. Stakeholders can understand uptake scenarios and identify priority areas for public charging to support customers in the future. ✓

Stakeholders and customers will be able to access different connection options and receive an instant quote to control their own plans and costs for public charging. ✓

The first two commercial electric buses have launched in Glasgow, contributing to Low Emission Zone targets. Each journey is saving 4kg of carbon compared to driving the same distance by car. ✓



Our support and funding has helped Edinburgh's cycle hire scheme add 42 new hire points across the city, encouraging more people to take up cycling. ✓

We will share results of our EV uptake project trials with the other DNOs to revolutionise how we plan the deployment of equipment to support domestic EV uptake. If adopted by other operators, the whole of the UK could benefit from the tool. ✓

Embedded Projects



As outlined in Part One, our PDE mechanism (Planned / Developing / Embedded) allows us to track and monitor projects and drive these into becoming fully embedded within our business. The timeline below includes a sample of projects and initiatives we have presented in previous stakeholder submissions which have now reached the 'embedded' phase of our maturity mechanism. These projects are now adopted as common practice and business as usual within our organisation.

2015/16

Angelesey Energy Island

Getting clever with Smart Meters

Protecting endangered bird species – Ospreys

'If there's a fault, then it's SP Energy Networks you need' – 105 campaign

Digging deep to solve pothole problems

Helping young people find a positive future – Alloa Schools 'Taster Day'

2016/17

Partnership with Scottish Association of Young Farmers Club (SAYFC)

Partnership with Rygbi Gogledd Cymry (RGC) and Wales U20s National Rugby Team

Partnership with Cheshire Fire and Rescue Service – mock substation and overhead lines at safety centre

Smart Meter installation – quarterly stakeholder engagement forum

Customer Care packs for customers affected by network improvement works

2017/18

Innovation Strategy – delivered 27 innovation projects with 42 partners

Liverpool City Region and Liverpool Local Enterprise Partnership – aligning our plans with theirs

Sustainability business strategy – first DNO to produce a comprehensive sustainability business strategy

Smart meter rollout – minimising customer disruption by reducing the amount of engineer visits when installing smart meters

2018/19

Heriot Watt Partnership – bespoke engineering scholarship

Cala Homes Partnership – network monitoring reports

Public Transport – partnership with First Glasgow, electric buses now in full operation

Cheshire Energy Hub

'Year of innovation' campaign

Partnership with Welsh Government



SP Energy Networks
SP House
320 St Vincent Street
Glasgow
G2 5AD

spenergynetworks.co.uk