A photograph of a business meeting. In the foreground, a woman with blonde hair, wearing a grey blazer, is leaning over a table and pointing at a tablet. Next to her, a man wearing a grey flat cap, glasses, a light blue shirt, and a dark tie is looking down at the tablet with his hand on his chin in a thoughtful pose. In the background, two other people are seated at the same table, looking towards the camera. On the table, there are several red folders, some with the text "Power to Live" on them, and some orange markers. The overall scene suggests a collaborative work environment.

Delivering meaningful outcomes for our stakeholders and customers

Part 2

Stakeholder Engagement
and Consumer Vulnerability
Incentive 2020/21

Welcome

Table of contents

1. Introduction	Page 1
- 2020/21 highlights	

2. Our strategy	Page 1
- Nobody left behind – Hard to reach	
- Measuring impact and value	

3. Keeping our promises	Page 3
- Our customers needs driving service improvements	
- Increasing the strength and resilience of small businesses	

4. Looking after our communities	Page 5
- Embedding our sustainable approach	
- Supporting the growth of community energy	
- Responding to local needs	

5. Unlocking our energy future	Page 9
- Driving improvement through data and digitalisation	
- Leading decarbonisation, supporting our region	

This is Part 2 of our submission to Ofgem's Stakeholder Engagement and Consumer Vulnerability (SECV) Incentive for the regulatory year 2020/21. Our SECV submission comprises three parts:

Part 1

An overview of our strategies and approach to ensuring customer and stakeholder voice is driving change and improvement now and in the future.

Part 2

Details and examples of how engagement is leading to measurable improvements for our customers and stakeholders.

Part 3

Setting out our consumer vulnerability strategy, partnerships and fuel poverty programmes and how we are ensuring that nobody is left behind.

Our regional structure enables our teams to best serve the local needs of our customers



8m⁺
customers

42,300
miles of underground
distribution lines

2,688
colleagues

17,400
miles of overhead
distribution lines

Introduction

Reflecting on the last twelve months and the challenges that we have faced alongside our customers and stakeholders, what is most evident is that delivering a safe and reliable network remains the top priority of those we serve. Our engagement continues to shape the detail and delivery of service improvements – both in terms of delivering improvements in-year and helping us understand, meet, and exceed customer expectations for the future.

This has involved us understanding the additional and changing needs of our customers in response to the ongoing challenges of COVID, and then tailoring our support to match these needs. We have achieved this through much more localised engagement and close working with our third-sector partners. I am proud of colleagues' work to support our communities while facing many of these same challenges themselves.

Looking ahead, we have used this time and the opportunities that have emerged – a scaled-up digital approach, for example – to expand our reach into seldom heard groups and engage more widely on growing challenges, including decarbonisation and 'building back better'. As a result, we have never had such a comprehensive view of our region.

This updated approach has helped us develop resources like our Future Energy Scenarios, our Green Recovery investment and, our collaboration with small business leaders and government to deliver a decarbonisation portal for SMEs.

I hope the panel will recognise the scale and breadth of the work we have done this year. This part of our submission includes examples in each strategic area demonstrating how engagement shapes our delivery and plans and delivers tangible and measurable benefits. We have included timelines this year to demonstrate how, as our engagement has matured, we are delivering more strategic and impactful outcomes for those we serve.

Patrick Erwin

Patrick Erwin
Policy and Markets Director – Northern Powergrid



2020/21 highlights

184

outcomes for customers and stakeholders

£23.5m+

financial benefits from stakeholder programmes

£80m

earmarked for green recovery investment

SME

decarbonisation support portal launched

1st DNO

to issue bonds under a Green Finance Framework

Our strategy

Our vision is to be the best energy company in serving our customers while delivering sustainable energy solutions for our region and our stakeholder strategy remains rooted in this ambition, with three overarching strategic objectives that guide our work.

Within these objectives, we have identified five consistent themes that have shaped our engagement and priority improvement projects for 2020/2021. These are:

Customer service

The pandemic has left people more aware than ever of their growing reliance on the energy system. In response, stakeholders asked us to enhance our customer service offer to meet the changing needs associated with the pandemic – particularly in relation to how we communicate with customers during a power outage and improvements in our out of hours service offer. Our customer service plan contains over 40 areas of service improvement, responding to customer feedback to make sure we continue to meet customer expectations with excellent service.

Building back better

The COVID pandemic has deeply affected our customers and stakeholders. Unemployment has increased to over 5% and we know that consumer vulnerability has spiked. As an important anchor organisation, we feel a responsibility to support our customers and partners in tough times and do what we can to encourage economic growth and social wellbeing wherever possible. We're working with national and local government, the business community and the third sector to ensure our investments have the most benefit.

Decarbonisation

Across our region, stakeholders have set ambitious decarbonisation targets and want us to help them reach net-zero as soon, in some

cases, as 2030. We have responded with a suite of tailored services, tools and support that enable different stakeholder and customer groups to achieve these ambitions and we have invited new groups into our governance process to make sure that these services remain in line with stakeholder need.

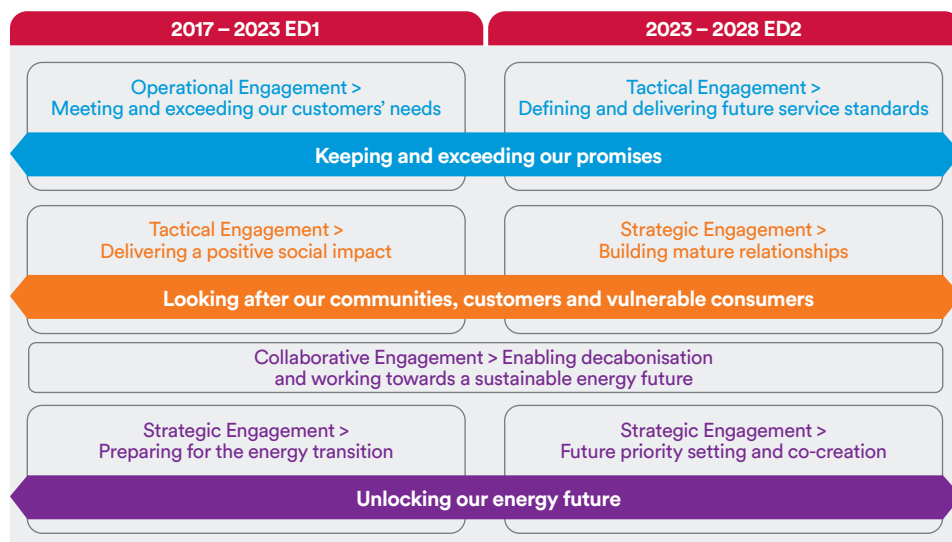
Sustainability

Stakeholders have asked us to demonstrate a joined-up approach to sustainability in an environmental, economic, and social justice context. They have asked us to work these goals into our own processes but also to set out how

we can support better sustainability across our region, with our partners and customer groups.

Inclusivity




Stakeholders tell us, again and again, that ensuring that everyone is included in discussions around service delivery and what the future will look like is vital to our success. With that in mind, we have reflected on our 'Nobody left behind' approach and revised it so that it is more reflective of the latest best practice approaches, and better serves our customers and stakeholders.



Nobody left behind - hard-to-reach

Part 1 sets out how we have developed our 'Nobody left behind' strategy; ensuring that traditionally underrepresented groups, and those who struggle to engage with us due to vulnerabilities and circumstantial difficulties, are engaged and their views considered.

In 2020/21, we sought to build on new evidence and industry experience with an improved 'Nobody left behind' framework, that forms the bedrock of much of our engagement work. Our submission contains examples of how this framework affects our projects in practice and a summary is set out below:

Approach	 Examine Identifying and understanding who is being left behind and why	 Empower Tailoring approach for inclusive and representative engagement and participation	 Enact Ensuring future policies, services and approach are fair and remove barriers to participation
Processes	<ul style="list-style-type: none"> Identifying seldom heard and hard to reach. Understanding socio-economic make up of our region. Identifying current and future social issues and barriers to the energy market. 	<ul style="list-style-type: none"> Tailoring our engagement approach for inclusivity and accessibility. Representative engagement and partnerships. 	<ul style="list-style-type: none"> Ensuring our current and future services are fair and equitable. Lobbying on behalf of our under-represented customers and stakeholder groups for fair and equitable policies, regulation and distribution of costs.
Enabling activity and policy examples	<ul style="list-style-type: none"> Identifying barriers - physical, emotional, societal, attitudinal, organisational, cultural, practical. 	<ul style="list-style-type: none"> Energy IQ education resources (see below). Inclusivity and representation tool and principles. Expanding partnerships to close gaps. 	<ul style="list-style-type: none"> 7 DSO transition principles. Flexibility offers. Well evidenced consultation responses.

Increasing Energy IQ in our region

New

Embedded

Research shows that a lack of understanding and knowledge of the energy sector is a key barrier to stakeholder and customer participation and engagement. At the same time, our stakeholders tell us that we have a legitimate role in educating customers and stakeholders on future changes to the energy sector and that they want us to consult more closely with future customers on how these changes may affect them, and how we should respond. This year has seen us refocusing our efforts on improving customer and future customer knowledge:

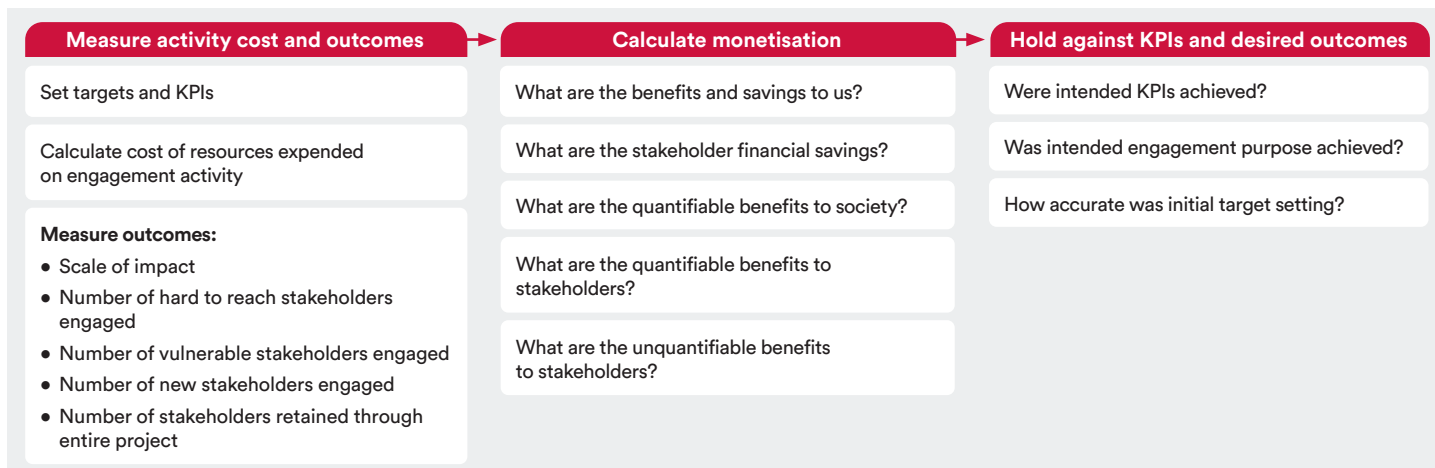
- In partnership with our future consumer panel, we developed the **New Power Generation project** and website which aims to equip

young people (10+) to become **net-zero champions**. Using clear, easy to understand language and guidance on what young people can do to reduce their carbon footprint. **Almost 6,000 future customers** have accessed these resources.

- Our series of **'What is' videos** have been developed to explain some of the more complex aspects of the developing energy system like flexibility, net-zero and energy storage. They have been promoted through social media and used as part of our pre-engagement in order to ensure that our customers and stakeholders are giving feedback based on a good understanding of the issue. We have recorded **15,623** impressions from customers who have viewed the suite of **14 videos**.

Measuring impact and value

We use measurement methodologies that let us quantify both financial and non-financial benefits for stakeholders and the return on investment from our activities. As an integrated part of our work, this year we reviewed our measurement methodology, benchmarked it against best practice examples and incorporated some of the joint DNO proxy measures.



Every year we work hard to improve our model and, recognising its strength, this year we have adopted the best practice SROI measures from the joint-DNO model that has been developed for the RIIO-ED2 business planning process into our impact measurement process. This methodology draws from a range of respected sources and helps us define a piece of activity in terms of savings, value – financial or not – and social benefit.

Our model helps us to accurately calculate the benefits of projects; those that are delivering value for money, or those that need adaptation or conclusion, if they are not delivering value for our customers. An example of how the model is applied at initiative level is included in part 1, page 5. Below we set out the overarching quantification for this years submission, aligned to the stakeholder strategy.

Keeping our promises

80 Outcomes delivered (overall 2020/21)

£500,000+ financial benefits (from example case studies)



Looking after our communities and vulnerable customers

84 Outcomes delivered (overall 2020/21)

£23M+ financial benefits (from example case studies)



Unlocking our energy futures

20 Outcomes delivered (overall 2020/21)

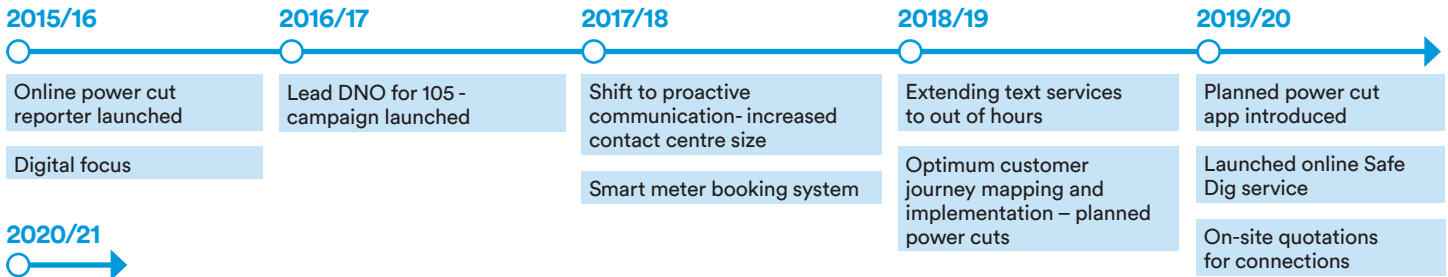
£100M+ future investment committed – enabling pathway to net zero



Keeping our promises

Our customers needs driving service improvements

We hear loud and clear that keeping our promises to deliver a safe and reliable network are still the top priorities and our engagement around these service improvements continue to help us to shape the detail and delivery of these. With more people working and schooling at home, the pandemic this year only emphasises the need for us to invest in the reliability of the network and deliver a challenging customer improvement programme that responds to customers needs.



Engagement activity

34,700 customers, rural customers and SMEs engaged through panels, benchmarking satisfaction surveys, rescue surveys, rescue calls and issue specific research interviews

Key feedback:

- Reliability remains the number one priority for customers and stakeholders.
- Customers would like us to provide greater flexibility to book appointment times for work, seven days per week based on good practice in other industries as well as same day, next day, evenings and weekends.
- 79% of 10,000** customers supported an extension of out of hours appointments.
- Putting things back as they were after completing our work is one of the key sources of dissatisfaction from customers in terms of timescales and quality guarantees.

2021 Benefits

- ✓ Increased flexibility and convenience for customers
- ✓ Avg customer waiting time for safe dig reduced from **56 to 4 minutes** resulting in **90.7%** customer satisfaction
- ✓ **£475,000** financial benefit for generation customers

Driving service improvement

New

Our Customer Service Improvement programme is grounded in customer engagement and feedback from multiple triangulated resources. It prioritises the key improvement areas which have also been costed against potential benefits and has been assured by our customer panels. Containing **over 40 key improvement areas** that aim to deliver first class service across all customers channels of choice, examples this year include:

- Our restoration strategy has been amended to target getting the lights back on within 6 hours – this is a longer-term target but we have amended our strategy and begun trialling technologies to achieve this improvement as soon as possible.

- Customers now receive a drop card with the commitment of putting things back as they were within 5 days and a quality guarantee.
- Where customers need to disconnect we have introduced a self-service option from quotes, through to payments and booking appointments everything can now be done digitally for those who wish, saving time and extending services out of hours.
- To save our customers time we have further automated our Safe Dig enquiry service.
- We will be trialling out of hours services throughout 2021, offering customers extra appointment slots at evenings and weekends; testing the appetite and viability of these services in the longer term.

- Introduced an on the day response target for customers reporting site safety clearance issues.

Outcomes

- ✓ Hand drop cards delivered for **73.2%** of planned power cuts.
- ✓ **24.8%** reduction in volumes of customer rescue calls needed (those scoring **less than 8/10**).
- ✓ **95.6%** customers restored within 6 hours (**0.2% improvement**), this is **88.3%** for Vulnerable Priority Service Member (PSM) customers (**1.3% improvement**).
- ✓ Average customer waiting time for Safe Dig records reduced from **56 to 4 minutes**.
- ✓ **90.7%** customer satisfaction with Safe Dig (**5.6% improvement**).

Supporting generation

New

We know, from our research, that network resilience remains a key priority for our stakeholders. Looking ahead to a decarbonised future, increased reliance on electricity as a fuel source means that securing reliability and capacity on the network is vitally important.

New requirements introduced to the Distribution Code aim to support this vision by encouraging generators to upgrade their equipment and reduce the number of trip faults across the network.

We launched a comprehensive programme of support to ensure affected customers

and stakeholders understand the changes and are supported in making the switch to new equipment.

We launched a targeted programme of engagement for affected groups, including the farming industry, hospitals, schools, universities and NHS Trusts, and set up a series of one-to-one and workshop style briefing sessions so that everyone had the opportunity to access information and expertise to help make the required changes. This was backed by a series of targeted digital communications across social media and through direct mail and we published information on our website with links

to approved contractors and details of financial support for switching to new equipment.

Outcomes

- ✓ **95** applications across the work programme **supporting 2GW of capacity in our region**.
- ✓ Fast track scheme launched that reduced lead times for Accelerated Loss of Mains Change Programme work to **less than 4 weeks** on average.
- ✓ **£475,000** funding accessed through our promotion of scheme.

Embedded

Progress on key 2020 initiatives - Improving real time communication with our customers through our planned power cuts app

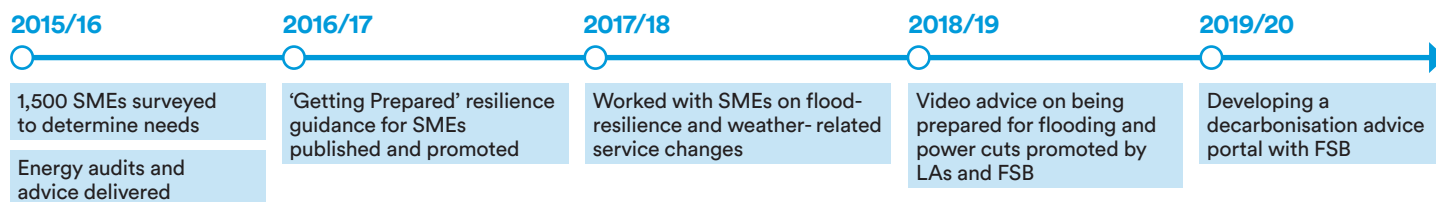
In 2019 we developed and introduced our bespoke, in-house app that enables immediate text messaging communications to our customers, providing real-time progress updates to tell them if we are on track and when we will complete. We also identified an opportunity to use our Customer Relationship Management (CRM) to improve all customer communications, which were moved onto the system, giving our colleagues a centralised view of direct engagement for each household and customer in our region. The app continues to deliver a consistently improved service for our customers.

	2019/20	2020/21
Average monthly number of PSR customers receiving proactive care calls 72 hours prior to a planned power cut	1,052	1,236
Proportion of PSR customers receiving a proactive care call 72 hours prior to a planned power cut	93.9%	96.8%
Planned Power Cut BMCS score before and after the launch of CRM Go App	90.3%	91.6%

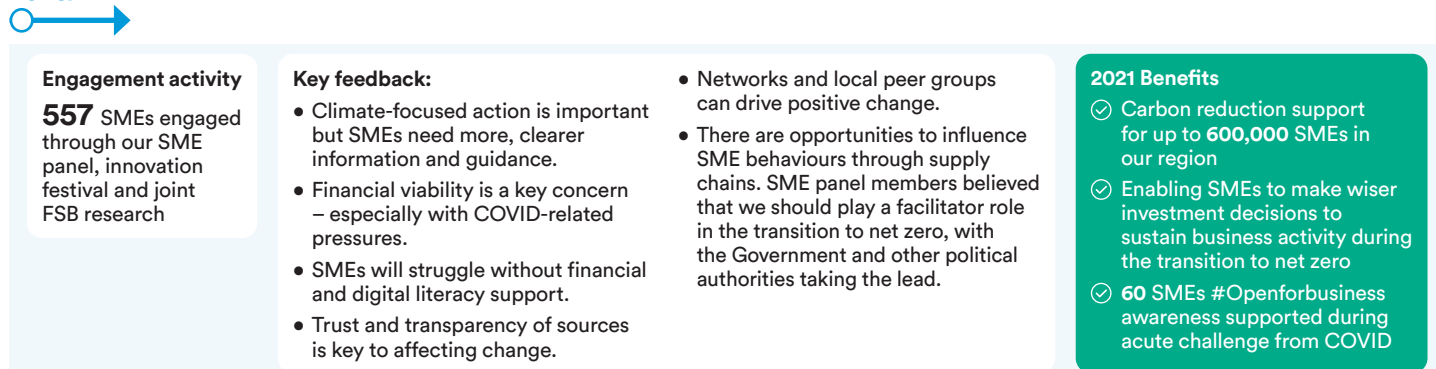
Increasing the strength and resilience of small businesses

The hard to reach group of SMEs and micro businesses makes up 99.8% of businesses in our region, employing approximately 1.6m people. Current industry approaches focus on awareness raising through direct communications or campaigns but with little measurement of impact.

We have focussed our early support around offering and promoting resilience advice around preparedness for flooding and power cuts. Over the last 2 years our engagement directly with SMEs and microbusinesses and our mature relationship with the Federation of Small Businesses (FSB) has seen an increasing interest, appetite and need for advice around decarbonisation as well as the more acute impact of the recent COVID pandemic on the survival of small businesses.



2020/21



#NetZeroSME decarbonisation advice portal

New

Last year we reported our lead role at the beginning of a joint project with the FSB to understand more about SMEs' specific needs and whether they were willing to support the development of a centralised advice portal as a 'neutral' party.

This year, this has developed into #NetZeroSME portal. We chair this collaboration with the other DNOs, the FSB and wider industry, that seeks to answer SME concerns around access to clear, trusted information on decarbonisation initiatives they can adopt. In developing the portal, we:

- Ran a comprehensive discovery phase, conducting a series of workshops with SMEs and industry experts, detailed interviews with sustainability experts and steering group members and a wider research effort, looking at 150 reports, surveys and media articles on SME make-up, green business, carbon reduction needs, and attitudes to carbon reduction in the small business sector.
- Developed a prioritised content plan for the portal based on feedback from SME leaders and individual **user research with 42 different SME groups and 254 individual businesses** across four broad categories – size of company, region, sector, and assets owned.
- Assured our work alongside our SME panel and project partners.
- Translated our content plan into a minimum viable product and **launched testing rounds with SME firms** to explore the relevance and value of our work and introduced the project to Government and

the wider region for input and support. The Government's Net Zero Champion Andrew Griffith and the Number 10 team have indicated their early support for an expansion of the project this year.

- Alongside these discussions, we are **negotiating with other DNOs to further widen the collaboration** and strengthen energy-related advice so that it is relevant to a wider UK audience.

Our partners



Outcomes

- ✓ Guidance available to **+160,000** FSB members and members of all **53 UK Chambers of Commerce**, on areas of carbon literacy and practical environmental advice.
- ✓ Launch disseminated directly to over **75,000** partners, members and stakeholders of the collaboration group.

Open for business – COVID support

New

Recognising the challenge for smaller businesses to keep their customers updated that they are still trading during the various COVID lockdowns, we worked with Pride Radio in the North East to support a super cluster advertising package for small businesses. This initiative gave North-East SMEs and charities a 2.5-minute advertisement playing 5 times a day over 4 weeks.

Outcomes

- ✓ Supporting **60** Businesses **140** times over a month.
- ✓ Listenership of **133,000** per week.

"What a crazy year it's been. We're so grateful to businesses like Northern Powergrid who have offered a helping hand to those small businesses that need it."

- Andrew Potts, Managing Director - KP Simpson Accountants

2021/22 Keeping our promises priorities:

- We will be trialling an algorithm using data like traffic, weather, time of day etc. to improve the accuracy of Estimated Restoration Times for power cuts given to customers.
- >**25%** reduction in multiple interruptions and long duration power cuts.
- Providing greater convenience to our customers through extending appointment times for planned works into the evening and weekend.
- Further developing the SME Decarbonisation Advice Portal including launching the cost saving calculator and local support and grants identifier.

Encouraging innovation and participation

New

SMEs in our region told us that our innovation projects seem closed off. In response, in 2020/21 we ran a dedicated **innovation festival** – attracting **500** delegates – to improve information exchange with SMEs and foster more participation and collaboration with small businesses.

We also launched a collaboration with the National Centre for Energy Systems Integration aimed at fostering collaborations with **SME supply chains** and we accepted a position on the North East LEP Energy Catalyst steering panel, to help direct SME applicants towards support and collaborations with us.

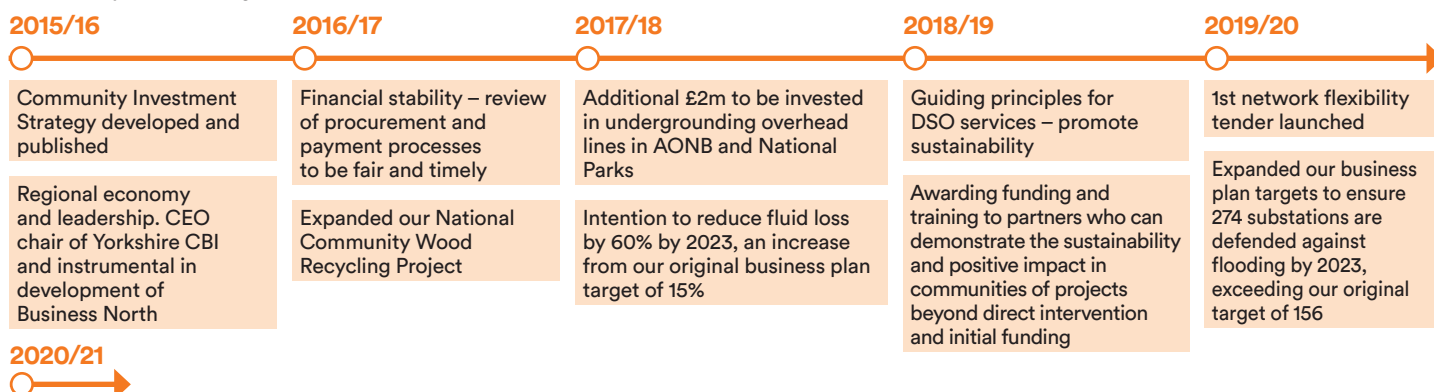
We commissioned the Energy Innovation Centre (EIC), with the energy networks, to research **innovation barriers for SMEs**. Following successful innovation projects, over a third of SMEs experienced challenges at procurement and a further 41% said that navigating the often-complicated procurement process of energy networks was prohibitive. As a result, we, the energy networks, in collaboration with the EIC, have developed '**The Innovator and Industry Charter's action plan**', so giving a voice to innovators which will directly impact on how we do business and result in a more effective innovation pipeline.

Looking after our communities

Embedding our sustainable approach

Sustainability is an enduring strategic priority for our business and stakeholders tell us that this remains an extremely important priority. With the impact of the pandemic, customers and stakeholders have asked us to better explain our work in this area and to make sure that we are adapting to meet new needs around the Green Recovery.

Following extensive benchmarking for UK and international best practice and road testing with stakeholders and customers, our work has crystallised into our comprehensive sustainability approach. It sets out how we take a sustainable approach to responsible business practices and outlines our relationship with society across a range of social, environmental, economic, and ethical issues.



Engagement activity

350+

customers, SMEs, stakeholders and colleagues engaged through panels, round table discussions and quantitative research

Key feedback:

- 96% of SMEs and domestic customers agreed that we should have a focus on sustainability and 93% felt our model made sense, with nothing missing (81%).
- The core commitments that customers want us to prioritise are:
 - Keeping downward pressure on costs by being efficient and fair, and advocating for fairness.
 - Playing our part in a socially inclusive transition to net zero.
 - Developing a skilled and inclusive workforce to meet the decarbonisation challenge.
- Stakeholders told us they want us to look at funding models that support green investments.

2021 Benefits

- ✓ £300M Green investment offering greater efficiencies and savings
- ✓ £123,206 Financial benefits through CO₂ savings and job creation
- ✓ Removing **82,000+** litres of fluid from the ground

Our sustainable approach

To be a cornerstone of an energy system that enables an exciting transformation, combats climate change and builds a more sustainable future for the next generation.

Social Sustainability

To be a force for good for our colleagues and communities by developing, supporting and protecting them.

2023 targets:

- ✓ **30,000** downloads of school safety materials.
- ✓ **>5%** of our investment schemes to have bespoke social programmes.

Economic Sustainability

To create long-term value through sustainable growth and keep bills affordable for our customers.

2023 targets:

- ✓ Support **90,000+** customers with energy efficiency advice and support a year.
- ✓ Creating **1,000** job opportunities in RIIO-ED1.

Environmental Sustainability

To play our part in protecting the environment, driving and facilitating decarbonisation and adapting to climate change.

2023 targets:

- ✓ **Undergrounding 120km of overhead lines** in AONB.
- ✓ Reduction of **2 million** fleet miles a year through telematics and operating model.



Economic sustainability - Green finance

New

In response to feedback from our Stakeholder Panel and other consultations with Government and industry partners about future funding models and our upcoming business plan, in June 2020 we became the first UK Distribution Network Operator to issue bonds under our new Green Finance Framework 'A Framework for Decarbonisation', with a **£300m bond issuance** at a low interest rate for 42 years.

The proceeds have been invested in projects that enable the up-take of low-carbon energy and a variety of projects that support energy efficiency efforts, pollution reduction, and that reduce the impact of our network on the environment. All of these schemes are aligned with specific UN Sustainable Development Goals.

Outcomes

- ✓ We have attracted new investors to our sector, validating our green finance approach.
- ✓ We have supported the development of the UK's sustainable bond market.
- ✓ Investments in this area will help the UK meet its commitments under the Paris Climate Agreement.

Social sustainability - Leeds GATE (Gypsy and Traveller Exchange)

Embedded

Leeds GATE received a grant from the Community Partnering Fund to deliver a homework club for children and young people from Gypsy and Traveller Communities in Leeds, to improve their skills around STEM and increase their confidence and awareness of opportunities. 28 children and young people were engaged through a varied programme of learning which included games and activities, one-to-one lessons and assessments, group lessons and setting and marking homework, as well as a visit from Sublime Science who provided science experiment activities. The young people also visited Leeds Beckett University for an engineering activity, where they were given a taste of student life.

Outcomes

- ✓ As a result of the activity, young people have progressed in their Maths and English.
- ✓ All **28** participants have increased their confidence.
- ✓ **2** new volunteers were recruited and **2** new jobs created, supporting the resilience of the organisation.

"Julie is twelve, she left school in year six due to cultural discrimination. She felt she had fallen behind badly over the years and missed out on social interaction. Joining the Homework Club has got her back into learning and she has plans now to go to college when she is older."

2020/21 update - Reducing our environmental impact through investment in innovative technology

Previous outcomes and benefits

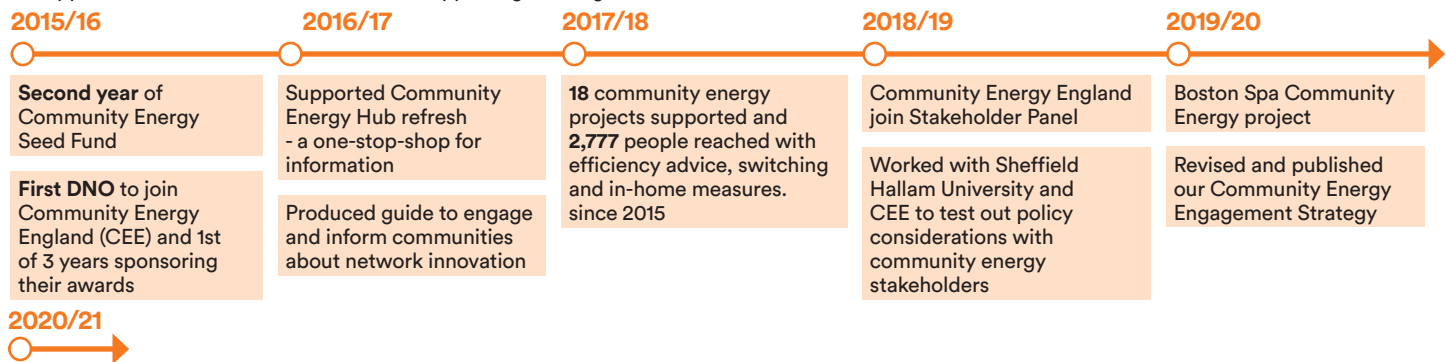
- Through our self-healing cable trial speeding up leak detection to further reduce our environmental impact.
- In 2020 we reported on our **£122m investment** in targeting **60%** reduction in fluid loss by 2023.

2021 update

- 31km** of fluid filled cable has been removed in the last twelve months - removing **82,000+** litres of fluid from the ground.
- This year we launched the first UK trial by a DNO of super low loss ground-mounted Amorphous transformers (AMTs), with installations at Jarrow, Consett, Bishop Auckland and Hull. Whilst still being trialled expected benefits include:
 - Reduction in core electricity losses from distribution transformers of **90%**.
 - Annual energy savings from loss reduction of **2GWh** - or the equivalent of **568 tonnes** of carbon dioxide every year.

Supporting the growth of community energy

Since 2013/14 we have worked closely with government and local groups to shape the way in which DNOs engage with community energy groups and, working closely with the industry, refining and improving our service offer. Recognising the slow growth of the industry in our region and the unique role we can play as the regional energy network in supporting growth through capacity building, expert community energy stakeholders asked us to re-think our approach and take a more active role in supporting sector growth.



Engagement activity

360 Community Energy stakeholders engaged through networking events, strategy research, webinars, bilaterals and our new Community Energy panel

Key feedback:

- Take a more active role in supporting sector growth. Specifically, bring community energy groups into decision-making and prioritisation process, and provide avenues for knowledge sharing, energy-related education and practical steps to support newly formed groups and encourage their growth.
- Recognise the difference in needs between advanced community energy organisations or early adopters and new climate action groups, the early majority.
- As well as more forums, stakeholders would like us to support them with innovation projects, funding opportunities and energy efficiency training in 2021.

2021 Benefits

- £2,525,526** Financial benefits in year
- Potential customer benefit of **£70 million** in ED2 from Boston Spa Energy Efficiency Trial
- Upskilled 207 third sector workers to increase energy efficiency advice reach by **397,000 p.a.**

Building capacity and capability in Community Energy

Scaled up

In 2020 we set up our **Community Energy Stakeholder Panel**, to give the sector a greater voice. Working with our Panel members and Community Energy England, we developed a capacity and support package - assured by panel members - that includes:

- Networking information.
- How to guides and resource packs.**
- Mentoring and technical assistance** opportunities with our experts.
- Fund information - about our **Community Energy Fund** and other accessible funding pots.
- A dedicated newsletter** that is accessible online through our website and available for sign up by interested stakeholders.

- Future workshops and events **focused on specific problems** and community options like heat decarbonisation and energy efficiency projects.
- Skills workshops for new groups** introducing them to our services, national policy and practical surgeries to understand the technical side of community energy connections, accessing support and available tools like AutoDesign.
- We worked with partners to identify and remove barriers to entry and, in 2021, launched a **new Community Energy Seed fund**.
- We have developed a programme to overcome barriers to the start up of **rural community energy projects**.

Outcomes

- An additional **£50,000** fund available and geared to attract applicants specifically from the Community Energy sector.
- Longer delivery time requirements meet the needs of the sector and encourage sustainable growth. The fund is open to more unconstituted groups enabling grass roots activity and growth.
- 50+** community energy partners upskilled.
- 90%+** satisfaction with events.
- 207** people trained in giving Energy Efficiency Advice with estimated dissemination to **397,440** people annually.
- 7** potential projects identified/supported.

Our Boston Spa Energy Efficiency Trial (BEET) update

BEET was suggested by a stakeholder panel member and we reported last year on its inception. The project runs from 2019 to 2023 and seeks to develop an efficient system that will use half-hourly averaged voltage measurements from smart meters in order to calculate an optimum 11kV target voltage that can be dynamically applied at three primary substations in the trial area. This will lead to lower energy consumption and reduced electricity bills for customers as well as carbon savings. This year has seen us:

Undertake a significant volume of system studies on the network - In addition to confirming the need for BEET, bottlenecks on the network are now better understood.

Continue testing and analysis of smart meters - leading to continuing work with industry stakeholders to resolve high running voltage and bottleneck issues identified and clarification that smart meters have a suitable voltage accuracy to enable them to be used for BEET.

Made progress installing pre-requisite 'smart grid enablers'. We have installed new hardware in and will be installing new telecommunications during 2021 to enable our trial substations to be 'BEET-ready'.

Conducted an extensive literature review of all relevant learning from across the wider industry, which confirms that this project is unique in its approach and that there is a significant body of evidence in support of the potential benefits to customers.

Refined the project plan and costs. BEET has several complex interfaces and technology requirements. A significant portion of the project budget relates to these requirements and we have been working closely with the technology vendors to confirm time, cost and scope.

Potential outcomes

- Trials could deliver circa **£20 savings per year per household**, resulting in **£270,000** financial benefit for the initial 15,000 participants a year.
- Subject to positive trial outcomes, we would then be seeking to roll this out across our entire network during R10-ED2. This could see a potential customer **benefit of £70 million and £500+ million** across the networks in R10-ED2.

Progress on the Community Energy Strategy

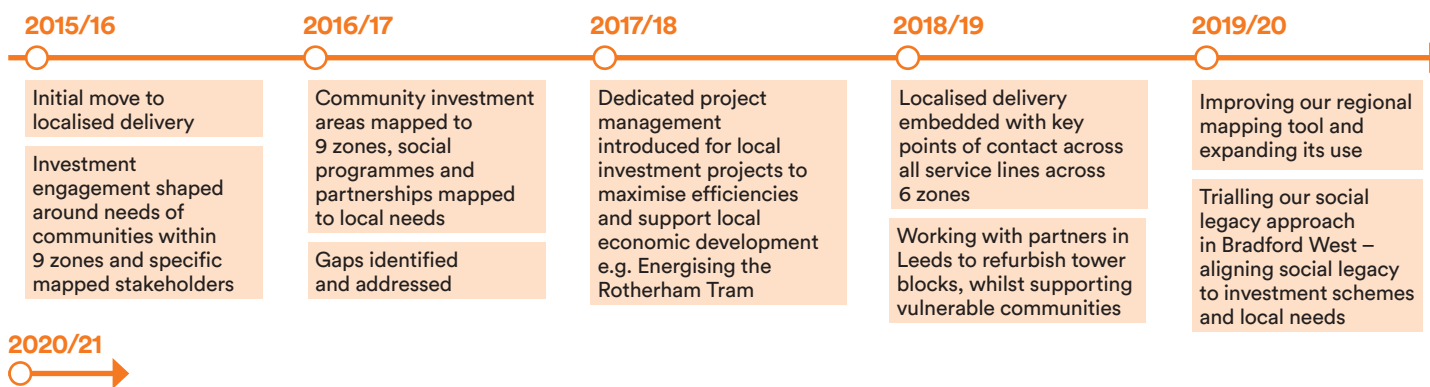
We made **26** commitments to be delivered by 2023 in our Community Energy Strategy published last year. **19** are complete and we have made significant progress on **7**.

Embedded

	Plan area and 2020/21 summary progress	Example 2020/21 actions and outcomes
Listen	<p>We will continue to listen to communities through the ongoing engagement as outlined in this plan.</p> <p>2 commitments - 1 complete and 1 significant progress made.</p>	<ul style="list-style-type: none"> Increased our mailing list nearly five-fold to 82 organisations. Conducted a regional community energy study with CEE to help us better understand the needs of the sector in our region, including research into how we can better focus community energy funding.
Inform	<p>We will keep communities up to date and informed about our activities which we hope will become more collaborative over time.</p> <p>4 commitments - 3 complete and 1 significant progress made.</p>	<ul style="list-style-type: none"> 63 community energy contacts signed up to our specialist newsletter. Spoke about community energy at four external events and at least six events we organised. Developed a community energy FAQ sheet, available from our website.
Engage	<p>We will engage early - we recognise that good engagement takes time and so will continue our engagement to help build up and facilitate a strong network of community and local energy organisations in our region.</p> <p>6 commitments - 4 complete and 2 significant progress made.</p>	<ul style="list-style-type: none"> Community energy groups have attended three Connections Surgeries during 2020. 167 community energy representatives attended 3+ participative networking events covering key topics prioritised by participants including building capacity, energy efficiency and network losses, as well as sharing best practice case studies from their own projects.
Empower	<p>We want to empower and build the capacity of community energy organisations to participate in and contribute to our changing energy system, to make sure it is democratic and benefits those less able to engage.</p> <p>12 commitments - 11 completed and 1 significant progress made.</p>	<ul style="list-style-type: none"> Sharing support and education resources available through the partner section of our website for fuel poverty outreach. Training in use of our AutoDesign tool and involvement of its development. Boston Spa Energy Efficiency Trial (BEET) - in progress.
Advocate	<p>We recognise communities don't have the capacity and time to lobby, we want to amplify their voice.</p> <p>2 commitments - both with significant progress made.</p>	<ul style="list-style-type: none"> Community Energy Panel established to provide strategic input to current business plan delivery and RIIO-ED2 plan development. Gathered insight to inform evidence from community energy at UK Parliament's Environmental Audit Committee.

Responding to local needs

Since embedding our localised delivery model in 2018/19 across our six operating regions, we have been delivering more locally driven, holistic services and engagement. In 2020/21, we have further improved our localised service with a specific focus on ensuring that the work we do leaves an enduring, positive social legacy wherever possible - and that this legacy is delivered using local partnerships alongside our local delivery teams, which helps to improve impact and value for money. Recognising the transformative nature of the pandemic and how this has reshaped local need, however, we have also put effort into reshaping our own service delivery, with specific details set out in the following case studies.



Engagement activity

338 customers, SMEs, regional and local leaders engaged through panels, deliberative round tables and bi-lateral meetings

Key feedback:

- We should collaborate with local charities, community centres and even SMEs, to deliver tailored social impact programmes.
- Supporting communities is considered one of the most relevant areas of our business plan to rural customers.
- The regional differences (demographic and topographic) within our operating area needs to be considered and fully understood to gain trust within the communities we serve - this should be done at planning stages of programmes, projects, or investment schemes.

2021 Benefits

- £1,582,707 estimated benefit from social impact programmes
- Stronger more sustainable communities as a result of positive social impact programme
- Supporting the health sector in the fight against COVID
- Customers supported when supply interruption is most impactful

Localised pandemic responses

New

Localised decision making supported rapid and effective pandemic responses across our region. Frontline teams have been able to assess situations based on their local knowledge and adapt services, as necessary.

Locally, this approach helped us to support rapid upgrades to the crucial NHS supply chain in Tyne and Wear and the construction of two Nightingale hospitals in North Yorkshire and the North East. With over 200 vaccination centres in our region we have agreed, introduced and promoted a priority process for vaccination sites to report any problems with their power supplies to us, which includes a 24/7 direct line.

Regionally, our teams adopted a new strategy that scaled back planned power cuts work, especially in high density areas and where we knew a lot of customers had switched to home working and extended our notice period where planned outages were unavoidable - going beyond the usual guaranteed regulatory standard.

Working with the Red Cross, we rolled out an enhanced service to vulnerable customers across our area, using best practice advice and infection control protocols to protect both our staff and our customers at all times.

Outcomes

- ✓ Face to face customer service for customers during the additional stress of the pandemic.
- ✓ Quickly supporting the increase in the manufacture of vital medical equipment and the establishment of Nightingale hospitals to help support the fight against COVID.
- ✓ Prioritising power restoration to COVID critical sites including vaccine centres, NHS and sites for the production of personal protective equipment.

Positive social impact

Scaled up

We reported last year how we had begun to align our engagement and social programmes with our asset investment programmes to meet specific local needs. We profile the investment area to understand its vulnerability profile and set aside a budget based on the scale and impact of our works. Then, through an intensive period of community outreach, in partnership with local stakeholders, we design an engagement and social programme in a way to minimise the level of disruption for local people and maximise a project's lasting social impact.

Example social impact planning for Sculcoates in Hull running January to September 2021

£2.5M investment with £25,000 social impact budget

Local profile:

- **Impact:** Residents in terraced properties (parking and access), digging local streets, noise, circling local play park.
- **Vulnerability Profile:** Poverty, Children, Energy and Education.
- **Key Stakeholders:** Business, Domestic households, Local Authority, 2 schools, 5 Churches/Spiritualist centres, local park, 2 charities (Victim Support/Bike Library).

Social impact activities:

- Supporting bike project refurbishing and maintaining second hand bikes for hire and for free in 20 bike libraries across the Humber region and beyond. They also work with the local prison where the **two prison workshops** act as a first port of call for any donated bikes, providing work for 15 men.
- **Energy Heroes and Electrical Safety** programmes being delivered in the schools.
- Volunteering to improve the condition of the local play park.
- The Northern Forest focuses on developing woodland stretching from Hull to Liverpool. In Hull this is being delivered by One Hull of a Forest; training military veterans in horticulture so that they can plant the trees. They have identified 641 sites around Hull (urban and rural) where they would like to plant trees.
- **CatZero** is a charity mentoring disadvantaged young people into employment and education. We are supporting them through funding and our own volunteers mentoring the young people they work with.

Following our success in Bradford over the last two years we have scaled up this model to deliver improvements across our investment programme.

Additional schemes include investment in laptops in Scarborough to **help unemployed individuals into work**, investing in the **woodland creation project** in Dinnington with a view to extending this within other schemes in South Yorkshire and additional funding to the **No Child Cold** project in Bradford providing small grants to families who cannot afford to pay higher fuel bills to keep their children warm while they are learning from home.

Last year as part of our large investment scheme in Bradford we funded/trained six STEM primary school teachers, alongside the **Teach First** initiative, engaged with women's groups and made a commitment to **WomenZone** - a mental health programme for South Asian women, and saw a **22.5% growth in Priority Services Membership (PSM)** registrations in the area.

This approach is really paying off; now in our second year we continue working closely with our stakeholders in Bradford, particularly the local councillors, local charities and the council's planning team.

This year that has resulted in:

- Appointing a dedicated **full-time customer liaison officer** who was recommended by the council as someone with strong community links and is multi-lingual. In addition to the local relationships and partnerships he has built he has also worked alongside local police to move over 50 illegally parked cars which have been taking up valuable on-street parking in the area - many of these have been there for years.
- Engaging with another women's group, **The Millan Centre**, we have cleared overgrown vegetation and are funding the landscaping and replanting of their outside space, to include provision of raised beds and fruit trees. We are also working alongside Bradford Council to create a new training room inside the centre.
- Supporting local businesses through **landscaping and upgrading public footpaths** alongside our ducting work, which has gone a long way in building trust and negating issues with any inconvenience and disruption the programme had caused.
- Liaising with the **council and schools to plan where trees are planted** in a way most beneficial to the community.

We are now beginning a new investment scheme in Silsden and we are continuing to work with the council to apply this approach based on the specific local needs.

"Local councillors receive regular project updates and local people are kept up to speed via regular media updates and ongoing letters. Northern Powergrid has also kept its promise to leave a lasting legacy in the area and have committed to planting thousands of trees across the city to offset the carbon generated by this project as well as working with local schools and charities."

It is for this reason that, when I was asked to support Northern Powergrid's engineering contractor Excalon with their customer liaison around the scheme, I felt no hesitation in agreeing to work with the business. Both Excalon and Northern Powergrid have genuinely placed local people at the heart of what they do and, for this reason, the project has been far less impactful than anyone could have hoped at the start. They really have provided gold standard customer service and communications."

— Councillor Mohammed Amran, Councillor for Heaton and Manningham and Head of Bradford Council's Bradford West area councillors

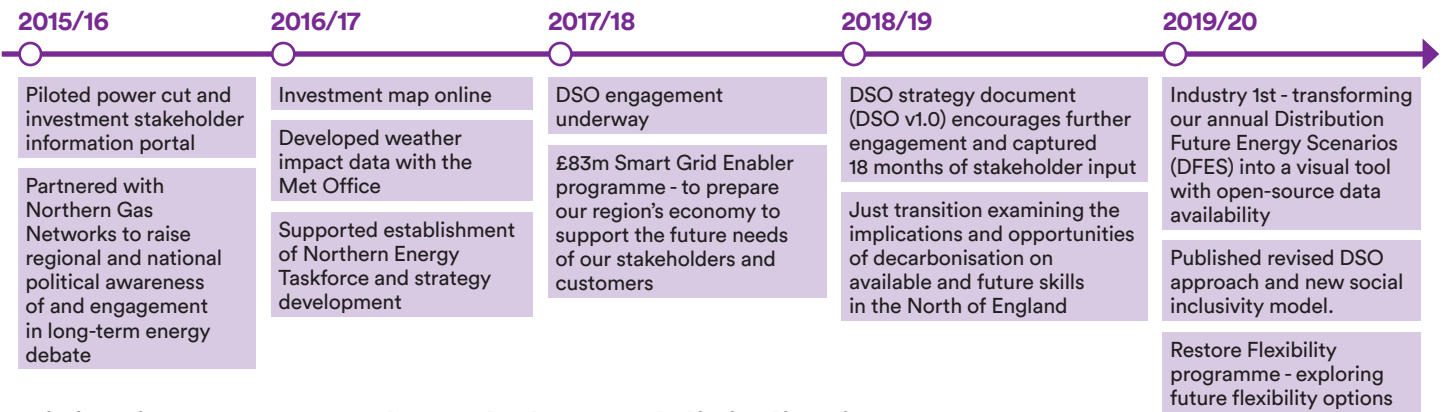
"I can honestly say how life-changing the Teach First programme is - both for participants themselves and for the communities they serve. As one of the most disadvantaged areas in the UK, Bradford doesn't always make the headlines for the right reasons. However, over the past few years, Teach First have helped to make Bradford into a beacon of educational excellence. With the generous support of Northern Powergrid, Teach First have been able to equip hundreds of trainee teachers with the knowledge and skills to change thousands of young people's lives. This is particularly true during the ongoing pandemic, where the challenges faced by Bradford's young people have arguably never been greater. Teach First participants and Ambassadors have stepped-up to the challenge, ensuring every pupil receives the support they need."

— Teach First Ambassador, Bradford

2021/22 Looking after our communities priorities:

- Defining medium and longer-term sustainability targets and continuing to embed the roll out of social impact schemes.
- Delivery of the revised Community Fund and capacity building to encourage more bids and successful projects from Community Energy organisations.

Unlocking our energy future



Driving improvement through data and digitalisation

New digital technologies, including automation, data analytics and artificial intelligence, will enable customers to become active participants in the energy system and transform how it operates. These changes will place new stresses on energy networks while simultaneously creating new opportunities to innovate and transform how we manage our systems and how we enable the transition to net zero. They are also driving profound changes in what our customers, partners, suppliers, and employees expect from us. In December we published the third version of our Digitalisation Strategy and Action Plan, informed and shaped by stakeholder feedback, and we continue to have ongoing dialogue on this key issue.

2020/21



Engagement activity

460+ customers, SMEs, ICP, IDNO Community Energy, experts and innovators engaged through panels, digital workshops, co-creation events, innovation festival and surveys

Key feedback:

- There is support for greater use of digital customer service tools.
- AutoDesign is an industry leading tool which should be shared with other DNOs and indicated we should work more with public sector agencies (e.g. Local Authorities and NHS England) who have lots of data.
- Stakeholders are keen to share and make best use of data and smart grid solutions to support the transition to low carbon and make most efficient use of the network capacity.

2021 Benefits

- ✓ Five year financial benefit from AutoDesign of **£1.3m**
- ✓ Partners and stakeholders can use data to support their own customers, investment decisions and infrastructure plans
- ✓ Accelerating roll-out of EVs

Shaping the future together – refining open data

Following the launch of our Distribution Future Energy Scenarios (DFES) visual tool with open-source data availability, we have continued to engage widely on how we can develop the tool, with support from stakeholders across the region.

Conversations have identified areas where we can improve the tool, including:

- The ability to set variable net zero end points - recognising the ambitions of some Local Authorities to move faster than others.
- Refinement of our initial industrial scenarios,

incorporating new data from business groups such as British Glass.

- A new methodology to sense check against existing car stocks.
- Adjustments to GB FES regional allocations where we have better information.

Across 2020/21 we have been working with stakeholders to test improvements as they are rolled out, with a dedicated round of testing for the 2021 open data models that underpin the DFES tool. This was followed by a formal launch of the new data in 2021.

Outcomes

- ✓ Improved model accuracy.
- ✓ Increased accessibility of data.
- ✓ Better usability including:
 - Sheffield City Council used the information to support their EV infrastructure plans.
 - The inclusion of distributed generation across our network within the tool, supporting work by Leeds City Council to map future work.

Embedded

Continuing co-creation of AutoDesign

We reported last year that we had co-created AutoDesign - a free, online tool that gives near-instantaneous answers about network capacity and indicative connection costs. The tool was launched for use by Local Authorities, consultants, ICPs, IDNOs and housebuilders in 2020.

Following positive feedback from users and a 10 month post-launch discovery phase, we began exploring further use cases for AutoDesign in partnership with users at a series of co-creation workshops, and created a development roadmap. As a result we are currently building in new capabilities, including the ability to map multiple scenarios in one application and enhanced optioneering features such as heat maps. We are also exploring the introduction of more data factors that will allow users to overlay maps and input different types of connections and larger capacities, and are working with our user group to ensure that these features continue to align with their needs.

Outcomes

- ✓ Since launch, **2,000+** free budget estimates generated in the twelve month period - saving customers at least **£300,000**.
- ✓ Quotation times have been reduced from 10 working days to minutes, saving an estimated **20,000** working days.
- ✓ Future roadmap for users will deliver options to generate firm quotations, quotes for larger and more complex connections, enhanced data mapping, enhanced optioneering and more detailed quotation breakdowns.
- ✓ **100%** of users have rated the tool as 'useful' or 'very useful'.



"[AutoDesign] has been a godsend to me. We are specifically looking at 8 sites for EV changing points for our long stay car parks and without the tool it would have taken much longer to get the quotations ... It's been excellent."

– Craig Nattress, Ryedale Council

Embedded

Leading decarbonisation, supporting our region

Our region is at the forefront of the green transition. The North East and Yorkshire sit at the heart of the fast-growing offshore wind industry. Humberside provides vital manufacturing support for green industries and is trailblazing carbon capture and storage technology. Inland, regional economic centres in Leeds and York are pioneering innovative green city strategies.

From Sheffield to Sunderland and Huddersfield to Hull, over two thirds of Local Authorities in our area have declared a climate emergency. We have met with over two thirds of our regional civic leaders directly and mapped data on key investments in our region so that we can understand local future needs and ambitions in relation to net zero, green recovery and our 2023 to 2028 RII0-ED2 business plan.

2020/21



Engagement activity

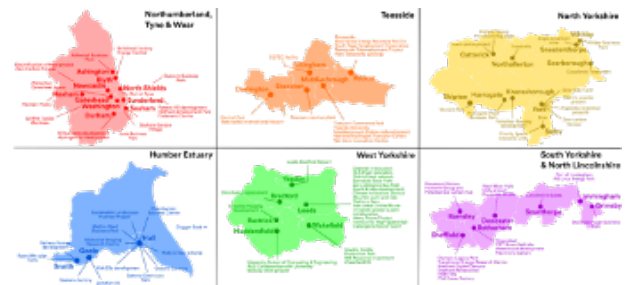
155 domestic, rural and SME customers engaged through panels and **329** regional leaders engaged through bi-laterals and a programme of regional conferences

Key feedback:

- The public are still not widely familiar with the idea of a 'green recovery' but once given information and explanation, our customers and rural panels were supportive of our approach on the basis that it will deliver benefits for all our customers.
- Regional leaders, political stakeholders and large energy users want us to prioritise close working on decarbonisation, the green recovery and the need for flexibility, as ways of achieving net zero.
- Early calls for ahead-of-need green recovery investment in the network saw unprecedented interest from regional stakeholders, with a long list of 38 potential projects identified across the region that will enable future decarbonisation and green growth.

2021 Benefits

- ✓ Formal commitments in place to support **Local Area Energy Plan** development
- ✓ **£100M+** investment
- ✓ Enabling regional economic development and rapid charging at **6** motorway sites
- ✓ Enabling circa **25,000** domestic properties and social housing to connect low carbon technologies



Building Back Better – green recovery

New

The COVID-19 pandemic has deeply affected our customers and stakeholders. Unemployment has increased to over 5% and we know that customer vulnerability has spiked. As an important anchor organisation, we feel a responsibility to support our customers and partners in tough times and do what we can to encourage economic growth and social wellbeing wherever possible.

Collaborating with national government, we were the lead DNO in developing and launching a Green Recovery initiative in late 2020, seeking to invest £50m into network improvements ahead of need, with a specific focus on supporting sustainable economic growth and social wellbeing. We engaged stakeholders through our Local Government Forums and Stakeholder Panels, and we launched a dedicated microsite focused on our Green Recovery programme.

We have also begun a programme of work - the Net Zero Ready Homes programme. Currently in phase 1, this programme seeks to work with early adopters and Local Authorities to identify areas with projected early Low Carbon Technologies (LCT) uptake and remove barriers for their connection in domestic properties and social housing.

"Network companies have an important role to play in delivering a green recovery. Investment in electricity networks is essential to meet our net zero objectives and also brings wider benefits for economic growth. I therefore welcome Northern Powergrid's engagement with stakeholders to build an evidence base to secure funding for network investment in your regions."

– Rt Hon Anne Marie Trevelyan MP, Minister for Business, Energy and Clean Growth

Outcomes

- ✓ **£75.1m** of capital marked for investment in projects across the region, **14** potential projects short-listed for investment ahead of need.
- ✓ Enables decarbonisation of **motorway services** in the region, **Hydrogen production** in the Humber and enabling decarbonisation and **economic development in towns and cities** like Seeham, Harrogate, Newcastle and York.
- ✓ Responding and supporting Project Rapid - fast charging at **6** strategic motorway service locations - enabling national targets by 2023.
- ✓ Additional **£30m** of capital supporting Net Zero Ready Homes.
- ✓ Designs already in place for circa **25,000** domestic properties and social housing enabling customers to connect low carbon technologies e.g. EV chargers and heat pumps.

Whole system thinking

New

The Local Area Energy Plans will bring together the civic, business and utility sectors to create joined-up, future-facing plans that support decarbonisation efforts.

We have developed a Charter, in partnership with Northern Gas Networks (NGN), which sets out our joint commitments for making this happen. We intend to review the Charter on an annual basis, in consultation with our Local Government Partners, to ensure our

commitments continue to reflect the status and direction of LAEPs.

Looking at solutions from a whole system perspective means supporting the success of our partners innovations. We are currently working with NGN to support them with their 'Hydrogen Town' project. In cases where domestic customers do not choose to have a hydrogen boiler fitted we will ensure capacity and any enabling works for heat pump alternatives.

Principle	Commitment for 2021/22
We will support a single conversation, in which Local Government does not need to navigate between the networks.	We will host a minimum of two joint LAEP workshop events each year, for all Local Authorities in our combined area.
We recognise and respect that LAEPs must be founded on a full consideration of the different pathways to net zero.	We will provide expert advice to local projects that seek to explore and plan for a range of pathways (for example the Hull & East Riding Carbon Pathway project) and use the outcomes to inform our own planning.
We will seek to openly share our data, developing joint data sets that support a whole systems approach.	We will develop a joint plan for sharing data that will support LAEPs, in consultation with our local government partners.
We will seek to identify, in partnership with Government and our regulator, Ofgem, opportunities to co-fund LAEPs.	We will work closely with Ofgem and central government, to identify funding for LAEPs and engage with our local government partners on how these funds could be best used to support local plans.

2021/22 Unlocking our energy future priorities

- Collaboration with Local Authorities, LEPs and Combined Authorities to develop a widely accepted blueprint for the delivery of Local Area Energy Plans and Local Decarbonisation Actions Plans. This will support more joined-up working in the long term and make future planning more robust and resilient.
- Increasing awareness and participation of customers in flexibility opportunities.
- Develop forums that further explore the decarbonisation of heat - bringing stakeholders together in debate and establishing areas of consensus where we can add value and support.
- Realise the potential of 'Build Back Better' with work delivered to support identified future projects in as many areas of our region as possible.

