



**Investing in Seaham
Proposed £8.5m
Green Recovery Scheme**

Introduction

Northern Powergrid is responsible for the electricity distribution network that powers everyday life for 8 million customers across the North East, Yorkshire and northern Lincolnshire.

Our network of more than 63,000 substations and 60,000 miles of underground cables and overhead power lines spans some 9,659 square miles and delivers safe, reliable power to 3.9 million homes and businesses.

In spring 2021, we asked stakeholders to nominate suitable locations to receive investment from the national £300m Green Recovery Scheme. All 14 fast-track network upgrade projects we shortlisted for funding were approved, unlocking £53m to accelerate green growth and job creation across our region.

One of the locations earmarked to benefit from this green growth-boosting network investment is Seaham, where we propose to invest £8.5m to build a new substation and deliver improvements to the overhead and underground network that powers the community.

The town has grown significantly over recent years and enhancing the network will ensure Northern Powergrid can meet the local demand for power both now and into the future, as well as enabling a range of projects such as new low carbon homes or the regeneration of former colliery land.

We are committed to openly sharing our proposals to invest in Seaham and support a green recovery in the regions we serve. This document provides detailed background about the Green Recovery Scheme, our proposed plans for Seaham, the benefits that investing in the town's electricity infrastructure could deliver for customers, and an overview of how Northern Powergrid collaborates with communities to reduce the impact of our work and leave a sustainable legacy.

Find out more:

Green Recovery background

www.ofgem.gov.uk/search?keyword=Green%20Recovery

Northern Powergrid

www.northernpowergrid.com/green-recovery



Green Recovery Scheme

The UK Government is committed to reducing greenhouse gas emissions to net zero by 2050.

In November 2020, the Prime Minister announced a 10-point plan for a green industrial revolution, with a focus on supporting recovery from the COVID-19 pandemic. As part of this plan, he announced that £300m would be made available for the UK's electricity distribution companies, including Northern Powergrid, to create additional network capacity, enabling green growth projects to be brought forward sooner and supporting technologies central to achieving net zero.

Industry body the Energy Networks Association (ENA), working with the energy regulator Ofgem and with support from Department for Business, Energy & Industrial Strategy (BEIS), led the regional distribution companies in a 'call for evidence' for the Green Recovery Scheme, asking stakeholders including local authorities, Local Enterprise Partnerships (LEPs), businesses and developers to state a case for projects that extra network capacity would enable in their respective areas.

Northern Powergrid put forward a shortlist of 14 projects for submission as part of the national scheme. All of these were approved, leading to a £53m cash injection into the region, including a proposal to invest in building a new substation for Seaham.

Find out more:

What is net zero?

www.youtube.com/watch?v=lKe8PqM36qs

What are heat pumps?

www.youtube.com/watch?v=1AXtiY4Zr4w

What is renewable energy?

www.youtube.com/watch?v=fUyNXfG5jEI



	£300m national Green Recovery investment available
	£53m Green Recovery Scheme investment for the Northern Powergrid region
	14 projects across 17 locations in the North East, Yorkshire and northern Lincolnshire
	£8.5m investment secured for a new substation in Seaham



Why Seaham?

Seaham has been earmarked for this investment due to a combination of existing need and green-growth opportunities presented by its geography and demographics.

The town has grown significantly over recent years, but much of the existing electricity infrastructure in the town dates to the 1970s and needs replacing to improve the quality and resilience of the local power network. Upgrading the existing network will ensure it is able to meet any future increase in the demand for power as the town continues to develop, the population grows, and more people invest in green technology such as electric vehicles, heat pumps and solar panels.

Northern Powergrid has successfully completed some £6.5 million of improvement schemes in Seaham in recent years that have helped resolve historic issues with cable faults, but the local network continues to face a number of challenges due to increasing customer numbers, long cable feeder lengths, and growing

demand for energy. Additionally, ongoing national decarbonisation plans that move the UK away from fossil fuels and towards electricity (such as the bans on new petrol and diesel cars from 2030, and gas and oil boilers in new homes from 2025), will place further long-term demands on the network.

Power in Seaham is currently fed from remote substations at Hawthorn Pit and Stoney Cut, which also supply other local towns and villages. In 2017, Northern Powergrid highlighted to Seaham Town Council that the town needed its own primary substation to support its long-term development. Green Recovery investment means we are now able to deliver this investment far earlier than planned.

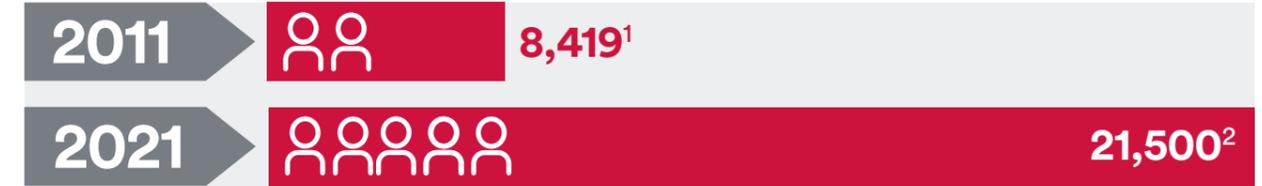
Find out more:

What is decarbonisation?

<https://www.youtube.com/watch?v=tDCtW223QD0>

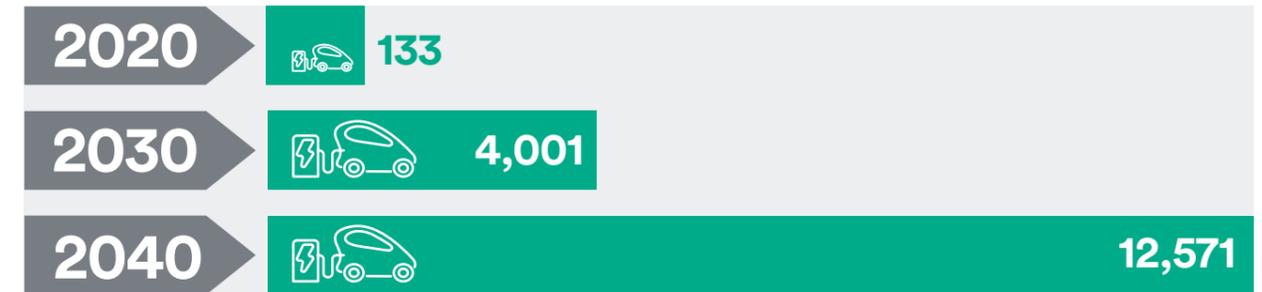


Seaham's growing population



Growth of electric vehicles³

The sale of new petrol and diesel cars will be banned from 2030 and will result in more local people needing to be able to power more electric vehicles in Seaham.



Enabling green growth

Increasing the resilience of Seaham's power infrastructure will ensure local businesses and residents are able to adopt emerging and necessary low carbon technologies earlier, as the network will be sufficient to support large-scale installation of, for example, individual and community electric vehicle charging points, heat pumps and solar panels.

Businesses in growth sectors such as renewables and low carbon technologies are also likely to look to areas that are instantly able to meet their power needs, bringing the potential to significantly boost the local economy and create green jobs.



“

As well as enabling charging of electric vehicles and the electrification of heat, network investment will provide support for supply chains and, where projects require expansion of the workforce, the creation of new jobs.

”

Keith Bell
Member of the Climate Change Committee



1 - figures taken from 2011 census

2 - figure from Seaham Town Council website

3 - Northern Powergrid Distribution Future Energy Scenarios 2020 - <https://www.youtube.com/watch?v=ekwiDzTWNqA>

New substation overview

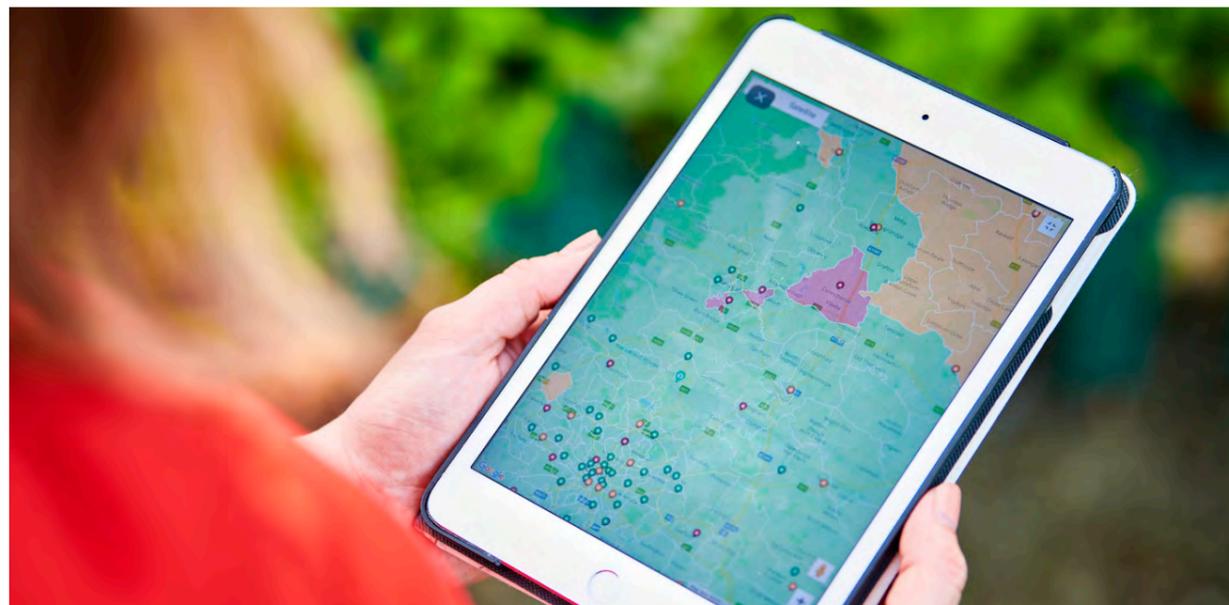
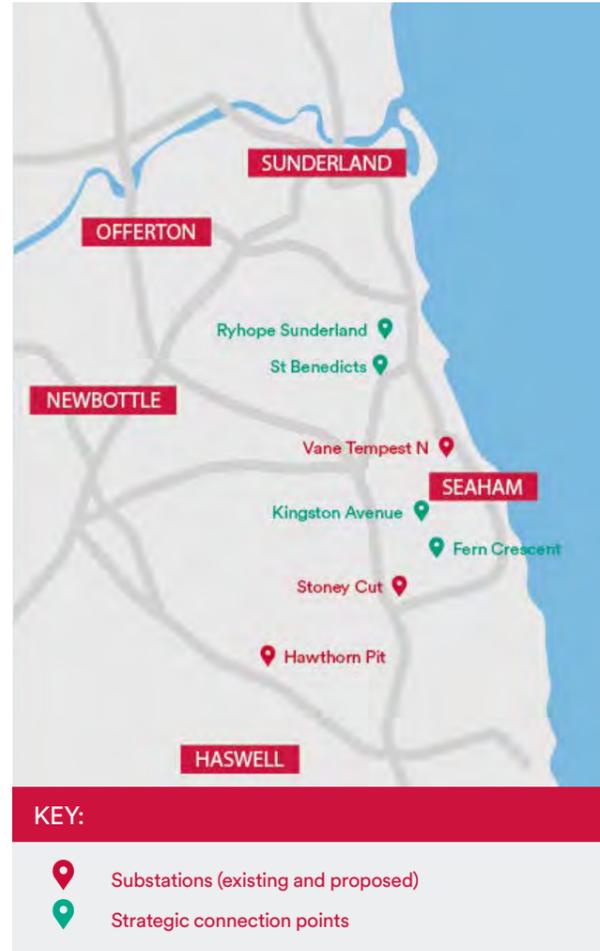
The investment seeks to significantly increase the town's power capacity so that existing and future demands can be reliably met.

The current proposal covers:

- construction of a new 66/20kV primary substation adjacent to the location of the former Vane Tempest Colliery substation, which was decommissioned in the early 1990s;
- overlaying around 1.8km of oil-filled 66kV underground cable; and
- installation of around 15km of 20kV cable to connect to strategic points in the Seaham network.

Initially, Northern Powergrid is seeking permission from Seaham Town Council to carry out exploratory surveys to determine whether the proposed investment is feasible. These include:

- **geotechnical** – determines the soil composition;
- **ecological** – identifies the extent of flora, fauna and habitats;
- **environmental** – identifies any ground contamination;
- **topographical** – maps the ground profile and determines the extent of cutting/filling; and
- **ground-penetrating radar (GPR)** – identifies any signs of below ground anomalies.



Respecting the local landscape

At this stage, we are only looking to assess the suitability of the proposed substation location. If surveys suggest the location is viable, we would then submit firm plans for consideration.

We always seek to reduce the impact of our work as much as possible. Before starting any development, we would work closely with the local community to agree aspects such as screening and general landscaping.

The illustration on this page show how the proposed site looks now (first image), how it might look after the substation is constructed (second image) and an example of how we would obscure it with mature trees and shrubs that reflect existing local landscaping (final image). We could also include wildflowers to support pollinators and insects, adding to the biodiversity of the area.



Current view of proposed substation location



Artist impression of proposed substation in situ



Artist impression of how mature trees and shrubs would be used to screen the substation

Working with the community

Being a force for good goes beyond our network which powers peoples' everyday lives. It includes everything from making a positive contribution to the communities we work and live in, to creating a cleaner, greener energy system that everyone can benefit from.

As part of our social impact programme we also look to minimise the impact of our work. This can include specific initiatives that offset carbon outputs, educate

communities about energy optimisation and carbon reduction, raise awareness among school children about the dangers of electricity, and generally provide support for vulnerable customers.

Find out more:

www.northernpowergrid.com/force-for-good

Some recent examples of our community collaborations:

Education initiative: New carbon-munching nature zone at central Bradford school

Pupils from Beckfoot Heaton Primary School have worked with Northern Powergrid and Bradford City Council to design a new garden on waste land that includes tree and wildflower planting, a veg growing zone, and wildlife pond. Children have also attended sessions educating them about safety around electrical equipment.



Community enhancement: Street trees and wildflowers enhance Hull cityscape and waterways

Working in partnership with Hull City Council and the Environment Agency, Northern Powergrid has consulted with customers around a scheme to offset carbon and encourage wildlife to flourish close to its Hull depot and a primary substation.



The first of 3,000 new trees being planted in Bradford to offset the carbon generated by our work in the city.

We are committed to keeping our customers informed at every stage of our work, through drop-in events, leaflets, letters, our website and regular updates via media and our social media.



Proposed timeline

7 September 2021

Request permission to carry out exploratory surveys on the site of the former Vane Tempest Colliery substation

Autumn/winter 2021

- Surveys are carried out
- Full planning application is submitted
- Public drop-in event

Early 2022

Estimated start date

2023

Estimated completion date

Find out more

Visit:

www.northernpowergrid.com/green-recovery

General enquiries

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(If your call is about our proposed work in Seaham please quote reference:
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