

Overview of the proposals

Scotland to England Green Link 2
April 2021

nationalgrid



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**UN CLIMATE
CHANGE
CONFERENCE
UK 2021**

BY PARTNERSHIP WITH ITALY

Meet the team



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Agenda

-
- 01** About National Grid

 - 02** Need for network reinforcement

 - 03** Our proposals

 - 04** Where we are now – consultation

 - 05** Detailed route fly through

01



About National Grid

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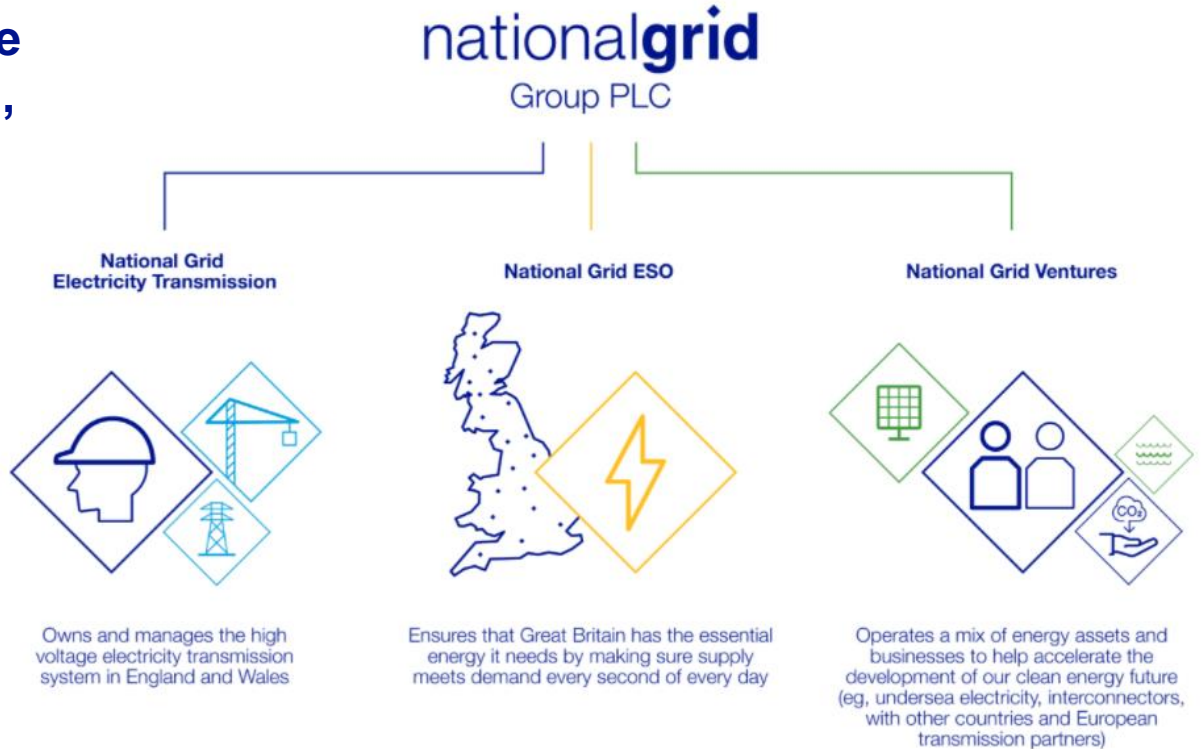
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Bringing energy to life

National Grid operate at the heart of the energy system, connecting millions of people safely, reliably and efficiently to the energy they use every day.

We are working to build a cleaner, fairer and more affordable energy system that serves everyone – powering the future of our homes, transport and industry.



Moving towards net zero

The UK has a world-leading target to tackle climate change, which is to achieve **net zero by 2050**.

We are already making progress towards this goal - 2020 was the greenest year on record for our electricity system.

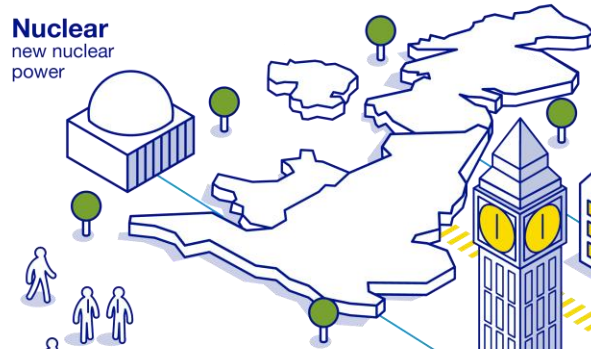
But more needs to be done.



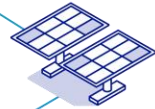
World
Net Zero by 2050

Jobs
400,000 jobs to build the net zero energy workforce

Nuclear
new nuclear power



Offshore wind
with 40GW by 2030



Solar Power
recording record energy generation



Electricity
coming ashore to people's homes



Interconnectors
transporting and sharing low carbon energy between the UK and the continent



A cleaner, greener future...



We believe by acting now, the UK can become the world's first major clean economy, with net zero carbon emissions by 2050, creating growth and jobs for communities across Britain.

UK has largest operating offshore wind capacity in the world – 8.5GW with a further 1.9GW under construction.

Offshore Wind Sector Deal, the Prime Minister's Ten Point Plan & Energy White Paper – 40GW by 2030 ambition.

Committee for Climate Change – expect electricity demand to double over next 30 years – 6th Carbon Budget – at least 100 GW of offshore wind required by 2050

02



Need for network reinforcement

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Our role and obligations



When new sources of electricity seek to connect to the network, National Grid ESO must offer terms to connect these sources to the system.

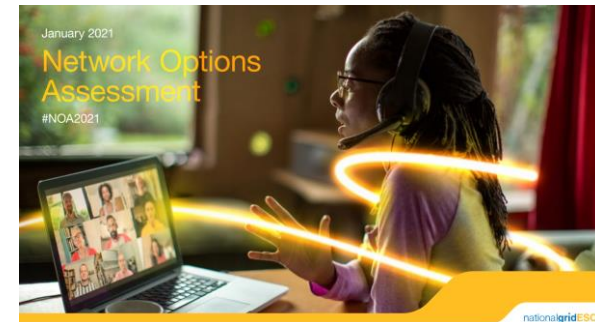
Under the Electricity Act 1989, transmission network proposals must be developed in a manner that is efficient, co-ordinated and economical, whilst also having regard to the desirability of preserving amenity.

When the development being connected is offshore, the offshore aspects need to be considered too.

Our role and obligations

To identify future network requirements, National Grid ESO, the System Operator, leads an annual review cycle:

- **Future Energy Scenarios** are discussed with stakeholders and then published each summer
- These then inform the analysis in the **Electricity Ten Year Statement** of transmission network requirements for the next decade – this is published each autumn
- Then, the **Network Options Assessment** in the spring recommends which projects proceed to meet future network requirements



Meeting the UK's green energy ambitions

- The Government has a net-zero in all greenhouse gases target in place for 2045 in Scotland and 2050 in England and Wales.
- By 2030 the Government's target is for 40GW of offshore wind to be delivered – enough to power every home in the UK.
- To help deliver green energy to homes and businesses across the UK, we need to increase the capability of our network between Scotland and England
- To do this, we are proposing the construction of two new High Voltage Direct Current (HVDC) links which will operate as electricity superhighways from Scotland to England.
- These links will be called the Scotland to England Green Links or SEGL1 and SEGL2.



03



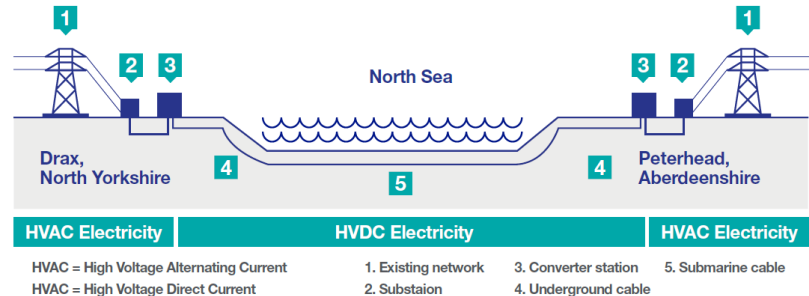
Our proposals



Our proposal

- We are proposing the construction of a 2GW HVDC link called SEGL2, which will run from Peterhead in Aberdeenshire to Drax in North Yorkshire.
- This link will carry enough power for two million homes.
- We are also proposing to build a new converter station and install underground cables from our landfall point at Wilsthorpe to Drax.
- The proposed locations for the new converter station and cable route have been selected after extensive research and planning.

How SEGL2 will work



Subsea offshore cable laying

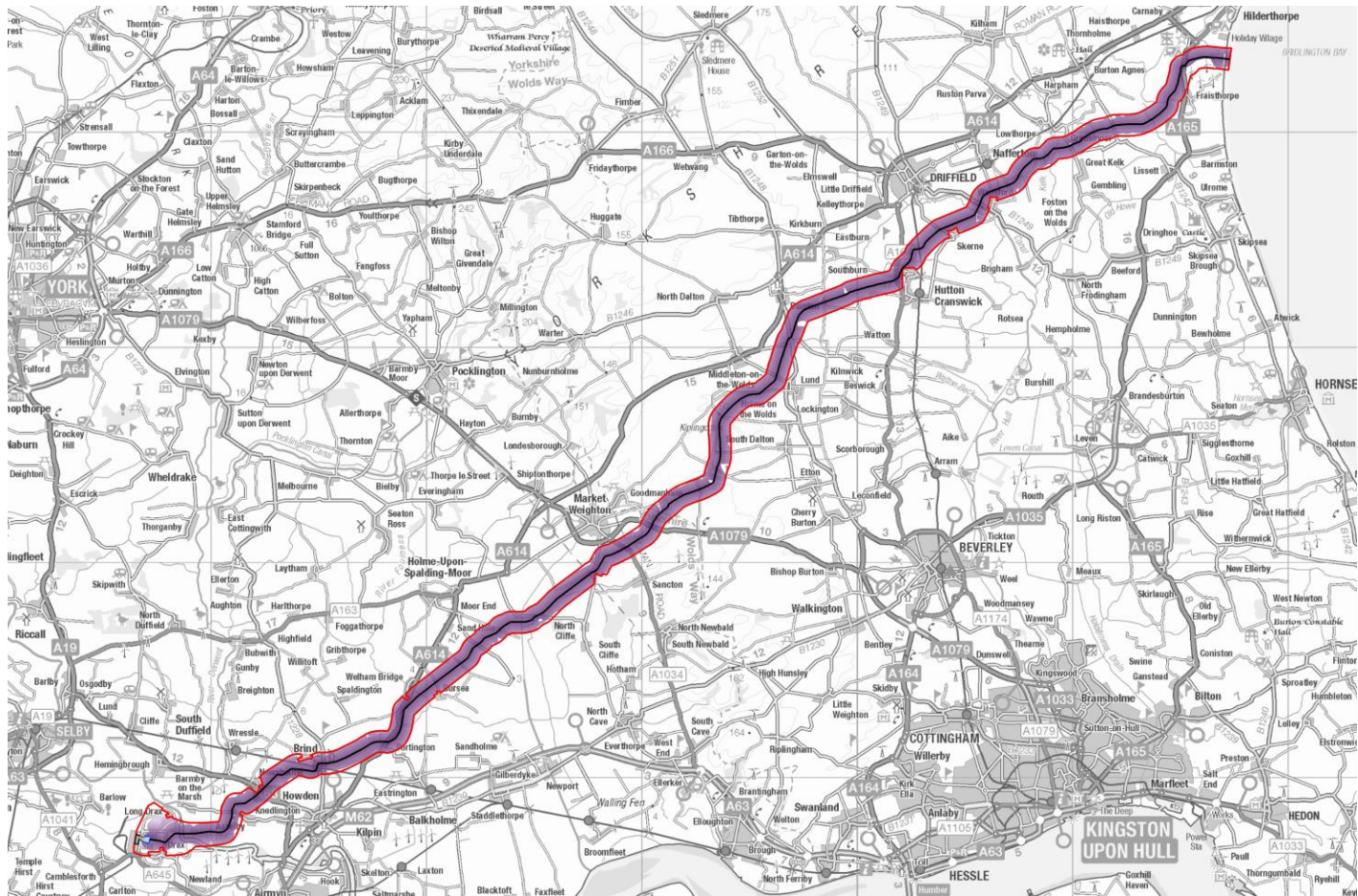
- The majority of the route will be offshore subsea cables, 440km.
- We undertake extensive maritime surveys to ensure that we cause minimal environment impact when laying subsea cables.
- This image is from another project, however it is indicative of the process we will use to lay the subsea cables.



Underground onshore cable laying

- In England, there will be 65km of cabling underground onshore.
- Cables will be installed 1.5m underground.
- National Grid has a policy of Biodiversity Net Gain +10, which means we always seek to leave the area in a better biodiversity position than it was before.
- Agricultural land in which cables are buried generally 'recovers' within 6 months
- This image is from another project, however it is indicative of the process we will use to lay the onshore cables.





Why Drax?

- Before recommending a location for the new converter station and proposed route, many factors were carefully considered including cost, benefit to the network, minimising infrastructure and impact on people, places and the environment.
- Drax already has a National Grid substation which is an access point to the UK electrical grid.
- Connecting SEGL2 to the existing network here provides the capability needed to deliver cleaner, greener energy to the rest of the country in the most optimum way.



**40^{GW}
by
2030**

Why Drax - continued

The new converter station and existing substation are critical components of our project.

- Our converter station will house the technology to enable clean electricity to be transmitted through the 505km cable.
- Currently finalising the design of the converter station, but we expect it to have a footprint of approx. 170 x 220 metres and be up to 30 metres in height.
- Substations are critical for controlling the voltage of electricity between the network and peoples' homes and businesses.
- We will connect the new converter station to the existing substation by constructing underground cables.



An indicative image of our Drax converter station

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Where we are now – Consultation

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Where we are now - consultation

We are currently holding a public consultation to seek views on our early proposals for SEGL2. We have set out the vision behind our proposals, the key elements of the project and how the community can share their feedback.

- Current consultation runs from 29 March – 23 April.
- We will be applying for planning permission in Early 2022, but before we do, there will be another opportunity for people to hear about our plans at public information events.
- Our consultation for SEGL1 will launch shortly.



Supporting the communities where we work

Our Community Grant Programme

Supporting charitable & not-for-profit community organisations in areas we are working with grants for social, economic and environmental initiatives – how to apply & find out more [here](#)

STEM initiatives

Encouraging the next generation to get inspired about science, technology, engineering & maths – e.g. funding Science Made Simple sessions for local primary schools

Skills development

Supporting the long term unemployed with skills development training

Supporting local charities

Donations to local good causes through our construction site observation card system



Key links and contact details

Public consultation website

<https://www.nationalgrid.com/uk/electricity-transmission/network-and-infrastructure/segl2>

Digital exhibition

<https://www.nationalgrid.com/uk/electricity-transmission/network-and-infrastructure/segl2/digital-exhibition>

Resident and stakeholder feedback form

<https://www.nationalgrid.com/uk/electricity-transmission/network-and-infrastructure/segl2/feedback>

Contact details for our project team

Telephone: 0808 196 8407 Email: info@segl2.nationalgrid.com