

National Grid's high wire act over the River Tyne

Engineers scaling two 390ft pylons to raise the height of the power line across the Tyne

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Engineers are scaling the dizzying heights of two of the country's tallest pylons to raise the height of a power line to allow ships carrying wind turbine parts to pass safely underneath.

They are climbing the two 390ft towers which stand either side of the River Tyne to change the position of equipment which carries the weight of the wires which span the river crossing.

The work has been six months in the planning and a number of new tools and techniques have been developed to allow the work to be done quickly and safely and without disrupting electricity supplies. The insulators on the towers are being moved through 90 degrees from a vertical to horizontal position to raise the height of the lowest wires by 4.5 metres. This will give the clearance needed for ships to pass below carrying wind turbine components manufactured at the Smulders Projects yard at Wallsend.

The work will ensure that Sky Jackets, the foundations which support wind turbines and sit on the sea bed, are able to reach their destination at offshore wind farms in the Moray Firth and near Aberdeen Bay. Raising the line will allow it to continue to operate safely and efficiently, delivering electricity to homes and businesses across the North East and beyond and helping maintaining National Grid's outstanding record for reliably delivering electricity.

Guy Johnson, Overhead Line Manager said: "We've been in conversation with Smulders and their predecessor, OGN about their need to move increasingly taller components along the river from the Wallsend yard out to sea. For operational reasons, the Sky Jackets need to be transported in an upright position and we need to make sure there is a safety clearance between the top of the load and the lowest power line over the river.

"The main challenge has been planning the job in a way which allows our engineers to work to alter the kit on the pylon as safely and as freely as possible at this great height as they would on the ground. We've developed new techniques and methodology for carrying out the works on these pylons."

Engineers have had to develop a way of keeping the wires on the lowest cross arms on the pylons under tension to raise the clearance underneath without placing strain on the cross arms or any of the other equipment on the tower. New ropes, winching equipment and rescue kits were also acquired because of the complexities and risks of at such a great height.

Guy added: "We are constantly developing our working practices to further increase safety, reduce costs and delivering value for money for electricity bill payers.

"The work on the River Tyne pylons is definitely a job for someone with a head for heights. Our engineers are used to working on pylons, but these are amongst the

tallest in the country after ones spanning the River Thames near London and the River Severn at Bristol.

“Our development and delivery of this project has been focussed not only on safety but also on keeping costs down, as these are passed on to bill payers. We’ve managed this through the way we have designed the project as well as through managing construction work efficiently.”

The project is due to be completed by 30 June and the first vessel carrying parts for the Beatrice Offshore Windfarm in the Moray Firth will pass below in August 2017.

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Notes for editors

Notes to Editors:

National Grid is pivotal to the energy systems in the UK and the north eastern United States. We aim to serve customers well and efficiently, supporting the communities in which we operate and making possible the energy systems of the future.

National Grid in the UK:

- We own and operate the electricity transmission network in England and Wales, with day-to-day responsibility for balancing supply and demand. We also operate, but do not own, the Scottish networks. Our networks comprise approximately 7,200 kilometres (4,474 miles) of overhead line, 1,500 kilometres (932 miles) of underground cable and 342 substations.
- We own and operate the gas National Transmission System in Great Britain, with day-to-day responsibility for balancing supply and demand. Our network comprises approximately 7,660 kilometres (4,760 miles) of high-pressure pipe and 618 above-ground installations.
- As Great Britain’s System Operator (SO) we make sure gas and electricity is transported safely and efficiently from where it is produced to where it is consumed. From April 2019, Electricity System Operator (ESO) is a new standalone business within National Grid, legally separate from all other parts of the National Grid Group. This will provide the right environment to deliver a balanced and impartial ESO that can realise real benefits for consumers as we transition to a more decentralised, decarbonised electricity system.
- Other UK activities mainly relate to businesses operating in competitive markets outside of our core regulated businesses; including interconnectors, gas metering activities and a liquefied natural gas (LNG) importation terminal – all of which are now part of National Grid Ventures. National Grid Property is responsible for the management, clean-up and disposal of surplus sites in the UK. Most of these are former gas works.

Find out more about the energy challenge and how National Grid is helping find solutions to some of the challenges we face at <https://www.nationalgrid.com/group/news>

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