

ESO's Voltage Pathfinder results in multi million pound consumer savings and delivers engineering solutions needed for tomorrow's greener grid

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- **National Grid ESO ran competitive Pathfinder process to manage voltage for a 10-year period**
- **The Pathfinder is worth £22.5m with multi million pounds* of consumer benefit forecast**
- **700 MVAR** reactive power capability, necessary for keeping voltage stable, will be provided by Dogger Bank C's onshore converter station and from National Grid Electricity Transmission**
- **First time reactive power to support the wider network will be provided by an Offshore Transmission Owner's asset**

National Grid ESO has today announced the results of the Pennines Voltage Pathfinder worth £22.5m, securing reactive power capability until 2034 and saving consumers millions of pounds.

As part of introducing greater competition onto the network, National Grid ESO's second voltage pathfinder compares market-based solutions against transmission owner solutions.

Dogger Bank C's transmission asset and National Grid Electricity Transmission (NGET) will between them provide 700 MVAR of reactive power capability in the North East of England and West Yorkshire regions between 2024 and 2034.

Julian Leslie, Head of Networks at National Grid ESO said: "These services take us another step closer to 100% zero carbon operation, showcasing Britain's innovation in engineering and driving competition within the system, ultimately saving consumers millions of pounds.

"Reactive power capability is vital for managing voltage and being able to operate a zero carbon system of the future so we're excited to see that an offshore wind farm's transmission asset will deliver reactive power to support the wider network for the first time in Britain."

As Britain's system operator, National Grid ESO has an obligation to ensure that voltage is managed within strict guidelines to ensure the safe and secure provision of electricity to consumers and businesses.

The Voltage Pathfinder identified two areas where reactive power solutions would be needed in the years ahead and introduced competition to ensure the most cost-effective services were selected.

In the North East of England, Dogger Bank C wind farm's transmission asset will help stabilise voltage on the grid after the expected closure of Hartlepool nuclear power station in March 2024.

In the West Yorkshire area, the Pathfinder process found that the counterfactual submitted by NGET was the most economic option for the ESO to manage voltage in the best interests of consumers.

NGET's delivery of shunt reactors at high voltage substations, will provide a reactive power service following the closure of other power stations in the area.

Lydia Ogilvie, Director of Network Strategy and Operations at National Grid Electricity Transmission (NGET) said: “As agreed with the ESO and Ofgem we cannot bid into the pathfinder process in the way other market participants can. Our agreed role for this pathfinder has been to provide a baseline to enable the ESO to compare the economic benefits of a fixed-term contract to a long-term regulated asset solution.

“The analysis undertaken by ESO in this instance suggests that there is an economic case for NGET to develop 500 MVar reactive capability in West Yorkshire.

“We will work with ESO and Ofgem to further understand the results and the consumer savings outlined and progress with the required projects to deliver the best outcomes for consumers.”

Steve Wilson, SSE Renewables Project Director for Dogger Bank Wind Farm, said: “Dogger Bank Wind Farm is continually pushing the boundaries of what can be achieved through the delivery of an offshore wind farm, breaking records and setting new milestones here in the UK and globally.

“Today’s announcement that Dogger Bank C will become the first UK offshore wind farm to use the functionality of its transmission assets to support National Grid ESO in balancing the network at the lowest cost is further proof of the outstanding innovation that our Dogger Bank team continually strives to deliver. It also demonstrates the significant positive impact that offshore wind energy, and Dogger Bank in particular, is having on delivering the UK’s net zero carbon electricity system while driving down long-term energy costs for British consumers.”

ENDS

Notes to editors

*The estimated consumer saving is forecast to be significantly above £10m.

**MVar – megavolt ampere of reactive power – unit of measurement for reactive power.

For further information, please refer to the Pathfinders website:

<https://www.nationalgrideso.com/future-energy/projects/pathfinders/high-voltage/Pennines>

What is reactive power?

National Grid ESO manages the electricity flowing across the transmission network from generation to demand. This electricity is transported at voltages much higher than what is delivered to people’s homes and businesses. We must make sure that the voltage remains within safe limits across the whole network. This is done by using equipment and generators across the transmission system to absorb or inject reactive power. Too much reactive power increases voltage levels, and too little reduces it.

Contact details

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