



Department for  
Energy Security  
& Net Zero

# Setting the national ambition

Thomas Hughes

# Context

## Net Zero by 2050

Net Zero Emissions by 2050

~100GW of Offshore wind generation by 2050

## 2030 ambition

50GW Offshore wind by 2030 (incl 5GW floating)

18GW interconnection by 2030

## Carbon Budget 6

Decarbonised power supply by 2035

Offshore wind as backbone of the system

## BESS

& Powering Up Britain Publication

Cut offshore wind deployment time by half

Half the time of network build and double pace

## DESNZ Priorities

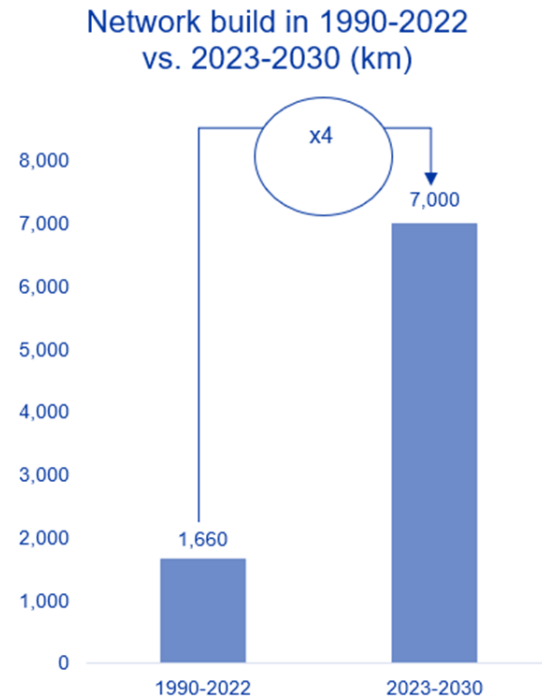
Speed up delivery of network infrastructure

Reduce the time taken to consent offshore wind

## Nick Winser Report

Recommends ways to increase speed of network infrastructure build/roll-out.

# The role of the grid



- Forecast rise in congestion costs to ~£3bn by 2029
- Up to £100-£240bn of onshore grid investment needed to meet net zero by 2050
- Potential to support up to 130 000 jobs in GB

# Strategic challenges



180KM OF PYLONS  
**SAY NO!**  
OFFSHORE GRID  
INSTEAD  
PYLONSEASTANGLIA.CO.UK

**Community  
acceptance**

**7000km**  
of HVDC and HVAC cable



**94**  
grid reinforcement inc 17  
HVDC converters and 19  
offshore platforms

**Supply chains**

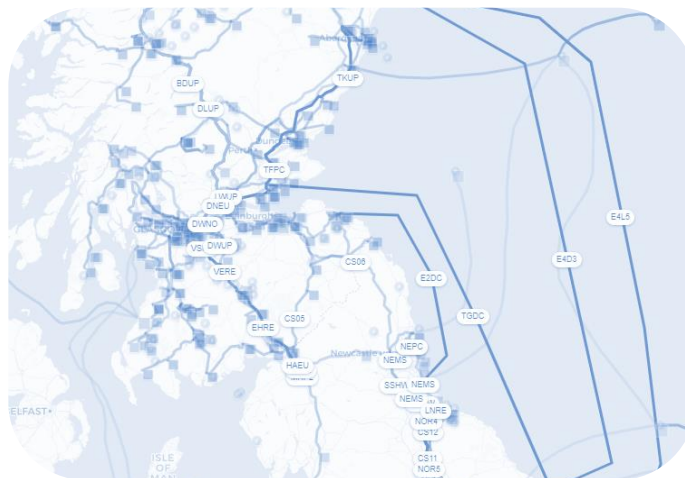


**Grid coordination  
& spatial planning**

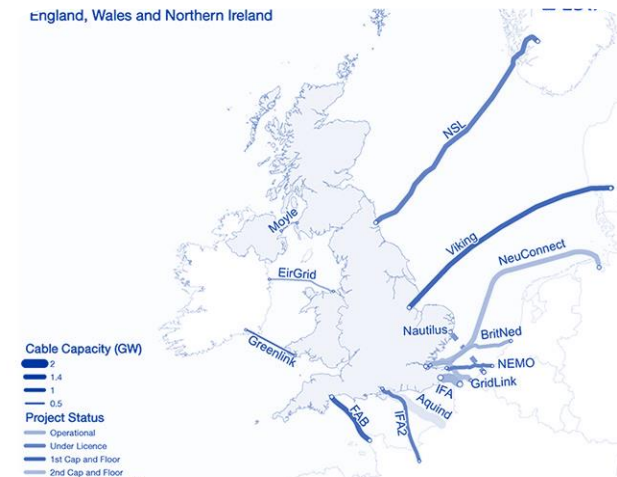
# HVDC – A key enabler



Connecting OSW  
at Distance



Facilitating Bulk  
Power Transfers



Regional  
Interconnection

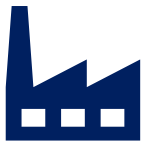
# Constraints to HVDC rollout



- Regulatory frameworks to enable multiple use assets to integrate into grid systems



- Regulation and innovation on interoperability of technology between companies and states



- Secure and sufficient supply chains to deliver enough HVDC cable and infrastructure



- Multi-jurisdiction and international cooperation on development, operation and regulation.





# What's Next? The Need for Speed

- National Policy Statements Consultation
- Progress Review of Electricity Market Arrangements (REMA)
- Community benefits consultation
- Progress Accelerated Strategic Transmission Investment (ASTI) projects
- Progress OTNR pathfinder projects (inc. Aquila)
- Progress MPI pilot projects