



The Great Grid Upgrade

Norwich to Tilbury

Community newsletter

January 2025

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nationalgrid

The Great Grid Upgrade

The UK Government has set a target to increase offshore wind energy to over 50 GW by 2030, enough to provide every home in the country with cleaner and more affordable energy.

By the end of the decade, up to 18 GW of offshore wind energy is expected to connect into East Anglia. To carry this new clean electricity to homes and businesses where it is needed, we will need to upgrade the grid, most of which was built in the 1960s. We've already rewired most of the existing overhead lines in the region to increase capacity and we now need to build new lines.

Norwich to Tilbury, along with other National Grid projects such as Sea Link and Bramford to Twinstead, will play an important part in achieving the government's targets and helping the UK to move towards net zero.

Our Great Grid Upgrade isn't only happening in East Anglia. It is a nationwide programme aiming to improve electricity transmission in England and Wales, enhancing energy security, cutting bills, and fostering a green jobs boom, potentially supporting 130,000 jobs and adding £4-11 billion to the UK economy by 2030.



You can find out more about Norwich to Tilbury and The Great Grid Upgrade on our project website: nationalgrid.com/norwich-to-tilbury



Summary of statutory consultation 2024

Last summer, we held our third stage of public consultation, inviting communities to share their views on our proposals for Norwich to Tilbury.

This statutory consultation ran from Wednesday 10 April until Friday 26 July. We extended it to give people more time to provide their comments after the July General Election.

We are grateful to everyone who took the time to respond to our consultation. Your feedback has highlighted concerns, provided valuable local insight and is helping us to refine our proposals.

All the feedback we received is being carefully considered and, as we develop our plans further, we will respond to the issues raised within a Consultation Report. This will be included as part of our application for a Development Consent Order (DCO) to build Norwich to Tilbury, which will be submitted to the Planning Inspectorate later this year.



Our statutory consultation in numbers (10 April to 26 July)

15

weeks of consultation

14

public consultation events

77,000

newsletters sent to homes and businesses across the region

6

webinars

Feedback

2,312

feedback questionnaires (434 by post and 1,878 online)

82

letters

6,500

emails

4,099

'response slips' from campaign groups

What you asked us



While the latest feedback is being considered by our team, we would like to provide answers to some of the questions we've been asked.

Why don't you upgrade the existing pylons to carry the new power?

We have. Over the past couple of years, we have rewired the existing pylons from Norwich to Bramford as well as those going west from Bramford to Pelham. This has increased the capacity of the existing lines but it is not enough.

We need to build new lines to carry all the power from the new offshore windfarms and other sources of generation connecting into the region.

Why can't you connect the windfarms offshore?

There is no fully offshore solution for connecting offshore wind to the grid. The power must be brought onshore somewhere so it can be transported across the country to the towns and cities where it is needed.

Where new lines are needed, we carefully consider the most feasible options, including their impacts on local communities and the environment, before presenting proposals for public consultation that deliver value for electricity bill payers.

Wouldn't an offshore grid be cheaper and quicker?

No. Building an offshore grid – in any form – would be more expensive and would take longer than the proposed onshore route which includes overhead line.

Pylons can carry more than 6 GW of power. Subsea cables can only carry up to 2 GW of power. To deliver the same capacity, we would need to build three offshore cables as well as significant onshore infrastructure such as converter stations. The costs to build the offshore links are estimated at £4.1 billion, compared to around £1 billion for the onshore route.

An offshore grid would also take longer to build and would not be ready for the end of 2030 when we need to connect offshore wind farms that are in development. Any delays would result in additional costs to consumers. An independent East Anglia Network Study carried out by the National Energy System Operator (NESO) in 2023, concluded that an offshore link would not be deliverable until at least 2034.

What happens to the feedback submitted during consultation?

All of the consultation feedback we receive is read and carefully considered by our project team. Where people have asked us to make changes, we are considering them and will carry out further, targeted consultation.

All the feedback will be summarised with our responses and published as part of our application for a DCO in an accompanying Consultation Report.

What work are you doing in the fields – have you started construction?

We haven't started any construction for Norwich to Tilbury. The only work we're carrying out is surveying activity. This includes looking at ground conditions, ecology and the environment, traffic monitoring and looking for evidence of buried archaeology.

The results of the surveys help inform decisions on the routing and siting of our pylons, underground cables, and other associated infrastructure, as well as methods of construction.

It is normal for these surveys to take place at an early stage of project development to allow us to consider how we might avoid, reduce, or mitigate potential impacts. We publish up to date information on where we are carrying out surveys on our project website: nationalgrid.com/norwich-to-tilbury

Are underground HVDC cables cheaper?

No. Burying the route underground, even with HVDC cables, would cost five to ten times more than an overhead line. It would introduce additional environmental and engineering constraints that need to be considered and we would also need to build converter stations where the new connection feeds into the existing AC network.



Interconnector converter station in Lincolnshire

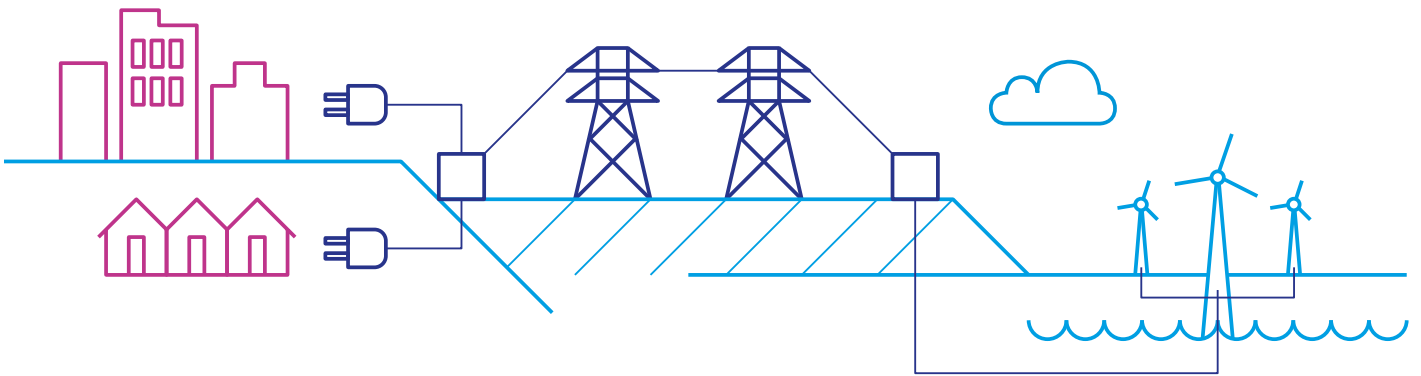
Why don't you use HVDC cables in the Dedham Vale National Landscape?

Using HVDC would require fewer cables and the total width of the cable trenches would be smaller, but we would also need to build multiple converter stations at each side of the Dedham Vale National Landscape.

The impact of building converter stations in these locations would be substantial.

What's the difference between AC and DC?

In the UK, electric power is normally generated, transmitted and distributed as alternating current (AC) which enables voltage to be increased or decreased by transformers so it can be used to power homes and businesses. Direct current, or more specifically, high voltage direct current (HVDC) is an alternative way to transport electricity. While HVDC can offer some advantages over very long distances, it can be more costly over shorter distances and requires converter stations at either end of the cables to convert the electricity into AC so it can be used in local networks. We have published a technical fact sheet about HVDC on our website – please see the useful links on the back page.



Are pylons safe?

Yes. We take health and safety very seriously and ensure that all our proposals are designed to be safe for the public and our contractors. We rely on authoritative and independent scientific organisations, such as the World Health Organisation (WHO) and the UK Health Security

Agency (UKHSA), to review the body of scientific evidence on electric and magnetic fields (EMFs) and health, as well as reviewing the science ourselves. Everything we build and operate complies with guidelines set by the Government on advice from UKHSA.

Are your proposals fully costed? How can we know they are accurate?

We've set out high level cost estimates for Norwich to Tilbury, including how our proposals compare to other strategic options – such as underground AC and HVDC options, and subsea HVDC cables.

These costs include factors such as our commitments over protecting the environment including improving biodiversity.

Until we have a final route and have considered every aspect

of the project, we will need to continue to assess costs.

The process we follow is robust and has been tested on other projects which have been consented. The cost assessments, strategy, plans and recommendations will be scrutinised by the industry regulator Ofgem and will also be tested by the Planning Inspectorate and the relevant Secretary of State.

The project website also contains answers to some of the most frequently asked questions.



nationalgrid.com/norwich-to-tilbury

What happens next?

Further consultation

Since our last consultation, we've been carefully reviewing all the feedback, along with findings of surveys. We've identified some places where we're considering whether to make localised changes to the proposals we published in summer 2024.

Before we make any decisions, we want to give nearby residents the opportunity to provide feedback on proposed changes in their local area. Over the coming weeks we'll write directly to nearby properties to explain what the change might mean and how residents can send any comments back to us. We will also publish any proposed changes on our project website, along with a questionnaire for anyone to provide feedback on each location.

The DCO process

Before we can start to build and operate Norwich to Tilbury we'll need to apply for a Development Consent Order (DCO). This is a form of planning application for nationally important projects. The decision on whether to grant consent is made by the relevant Secretary of State after the proposals are examined by independent examiners (called the Examining Authority) appointed by the Planning Inspectorate.

We expect to submit our application for a DCO in 2025. Once we submit our DCO application, the Planning Inspectorate, on behalf of the Secretary of State, has up to 28 days to decide whether the application meets the standards required to be accepted for examination.

If the application is accepted, it will go through a six-month examination period. This is an independent review by the Examining Authority of all relevant representations and supporting evidence.

Anyone wishing to be involved in the examination process will be invited to register their interest with the Planning Inspectorate.

Those who register their interest will be invited to submit their views on our proposals in writing and may be asked to speak at any of the public hearings that are held.

The Examining Authority is the Inspector, or the Panel of Inspectors, appointed to conduct the Examination of the application for the DCO.

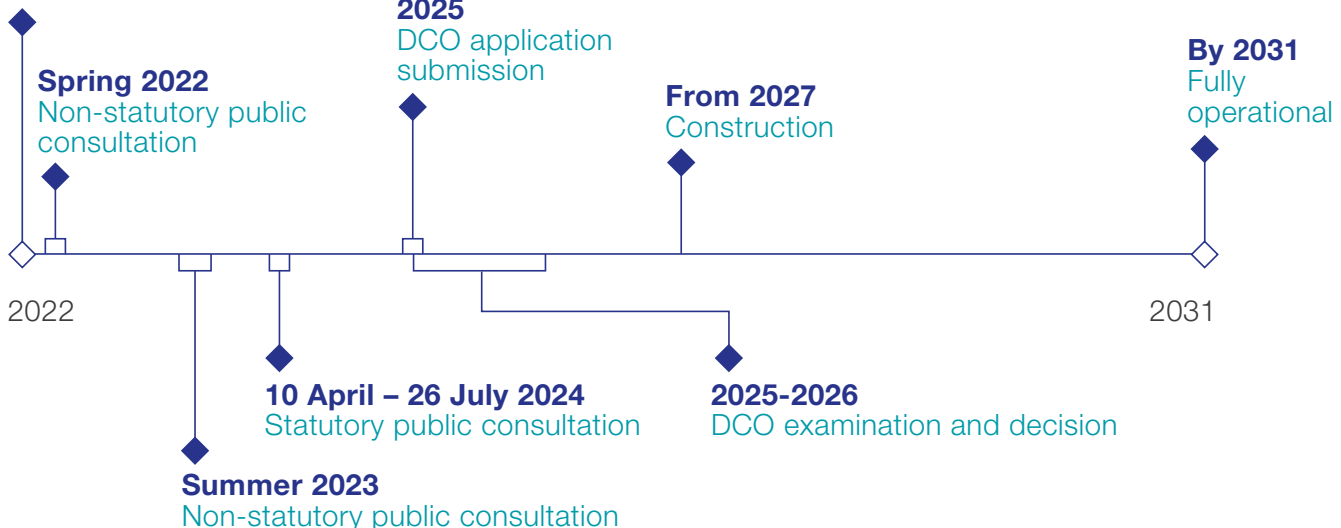
Within three months of the close of Examination, the Examining Authority must prepare a report on the application and submit this to the Secretary of State, including a recommendation. The Secretary of State has a further three months to make a decision on whether to grant or refuse development consent.

If the Secretary of State grants development consent, we plan to start construction in 2027, with the intention of being fully operational by 2031.

Norwich to Tilbury project timeline

January 2022

Launch





Stay in touch

We publish regular updates on our project website. You can also sign up for our newsletters.

Useful links



Norwich to Tilbury website:
nationalgrid.com/norwich-to-tilbury



Norwich to Tilbury Project Background Document:
nationalgrid.com/electricity-transmission/document/154586/download



Strategic Options Backcheck and Review:
nationalgrid.com/electricity-transmission/document/154546/download



National Policy Statement for Electricity Networks Infrastructure (EN-5):
assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1147384/NPS_EN-5.pdf



Ofgem:
ofgem.gov.uk



NGET Response to ESO East Anglia Network Study:
nationalgrid.com/electricity-transmission/document/154771/download



Video: How Nationally Significant Infrastructure Projects are approved or refused:
youtube.com/watch?v=izb3_r8fzTM



Technical factsheet on HVDC:
nationalgrid.com/sites/default/files/documents/13784-High%20Voltage%20Direct%20Current%20Electricity%20%E2%80%93%20technical%20information.pdf

Contact us

If you would like to contact the community relations team, please get in touch via:

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