

Navenby Substation

Frequently asked questions

September / October 2024



nationalgrid

About National Grid

1. Who is National Grid?

National Grid sits at the heart of Britain's energy system, connecting millions of people and businesses to the energy they use every day. We bring energy to life – in the heat, light and power we bring to our customer's homes and businesses; in the way that we support our communities and help them to grow; and in the way we show up in the world. It's our vision to be at the heart of a clean, fair and affordable energy future.

National Grid is a group of companies, and within the National Grid Group there are other distinctly separate legal entities, each with their individual responsibilities and roles. More information about National Grid can be found on the 'about us' section of National Grid's website.

2. Who is National Grid Electricity Transmission (NGET)?

One of the companies in the National Grid Group is National Grid Electricity Transmission (NGET), which owns, builds and maintains the high voltage network in England and Wales. This network operates primarily at 400,000 volts (400kV) and 275,000 volts (275kV).

It is NGET who is developing plans for Navenby Substation.

3. What is National Grid Electricity System Operator (ESO)?

The ESO is the Electricity System Operator for Great Britain. The ESO makes sure we all have the essential energy we need by ensuring supply meets demand every second of every day. Generators of electricity apply to the ESO when they wish to connect to the high-voltage electricity network and the ESO leads the work to consider how the network may need to evolve to deliver a cleaner, greener future. In April 2019, the ESO became a legally separate business within the National Grid Group and is regulated independently by Ofgem.

4. What is a substation?

Substations are integral features of the transmission and distribution networks and enable electricity to be transmitted at different voltages, securely and reliably. One of the main roles of substations is to convert electricity into different voltages. This is needed so the electricity can be transmitted throughout the country and then distributed throughout local neighbourhoods and into our homes, businesses and buildings.

NGET takes electricity generated from solar farms and other power sources and transports it through its network of pylons, overhead lines, cables, and substations. It then transmitted at a lower voltage via the local distribution networks to homes and businesses. The proposed Navenby Substation lies within this network.

5. Who owns substations in the UK?

NGET owns more than 300 substations, where 275kV and 400kV overhead power lines or underground cables are switched and where electricity is transformed for distribution to surrounding areas.

The majority of the remaining 132kV and smaller lower voltage substations are owned and maintained by local distribution companies.

6. How does National Grid fund its projects, and how does it re-invest its profits?

National Grid funds new projects, such as power transmission lines, through an agreement with Ofgem. They pay upfront costs, which are gradually passed on to customers over 40 years. Investors support National Grid, expecting profits and eventual repayment. This approach helps to spread the investment cost over years, avoiding sudden spikes in electricity bills.

At National Grid, our priority in developing projects like Navenby Substation is to ensure energy security, support the transition to a cleaner energy system, and keep energy affordable for our customers. While we operate as a private company, our investment and project development decisions are made within a regulatory framework designed to balance the need for investment with the interests of consumers and the wider public. Our profits are regulated by Ofgem, ensuring they are fair and aligned with efficient and necessary investments in the energy system.

7. Are higher energy bills needed to pay for Navenby Substation?

The bill you receive from your energy supplier is made up of several separate charges. Some of these charges are based on the different stages through which electricity makes its way from the producers to your home. In 2022/23, £19.70 of the annual household bill was for operating, maintaining and investing in the national electricity transmission system. This charge is set by the energy regulator Ofgem and is not affected by the price of energy. Around £100 of your annual household energy bill goes to the local distributor to build, maintain and invest in the local electricity network.



About Navenby Substation

8. What is the Navenby Substation project?

National Grid Electricity Transmission is consulting on proposals to build a new substation in the local area, approximately 1.4km from Navenby, Lincolnshire.

There is a shift towards renewable energy sources, meaning there is greater demand on our network to connect new sources of electricity and customers. The proposed substation at Navenby is in response to the increase in connection requests through the ESO (**see Q3**) and increased consumption of electricity that will continue to grow. In the Navenby area several developers have requested new power connections from National Grid, and as a regulated business, we have a legal obligation to meet these requests.

To connect several proposed solar farms in the area, including Springwell Solar and Fosse Green, a new 400 kV substation is needed. It is not possible to connect everything proposed in the area to existing regional substations.

9. What is the size of the substation?

The substation will be set back from the road and cover approximately 32 acres. It will be an 'open air' substation, and the equipment on site will be a maximum height of 15 metres. The proposed substation is contained within one site.

10. What is the project timeline?

Our planned timeline of activity is below:

- **Summer 2024:** Public consultation for the proposed Navenby Substation
- **Spring 2025:** National Grid submit planning application to North Kesteven District Council and Section 37 submitted to DESNZ
- **Summer 2025:** Planning decision expected by North Kesteven District Council regarding the proposed substation
- **Summer 2026:** Subject to approval, substation construction starts
- **Spring/Summer 2028:** Construction of the four new pylons will take place
- **Late 2029:** Substation construction complete

11. Will there be any pylons built as part of the project?

Four new pylons will need to be constructed as part of our plans, and two existing pylons will be dismantled.



Local communities and the environment

12. What will the impacts on the local community be during construction?

During construction we will need to carry out a range of temporary activities such as creating equipment storage areas and site offices. Ahead of the project starting, we will have completed environmental surveys evaluating the impact from dust, noise, and other environmental measures.

We will work closely with the local community to minimise the impact of our project, where we can, and support community initiatives in areas where we are working, to deliver social, economic or environmental benefits. We will write to local residents with more information on construction traffic routes and our working hours closer to construction starting.

13. Will people living near to the infrastructure receive money off their bills or direct payments?

No – people living near the infrastructure will not receive money off their bills or direct payments because of the project. It is our job to upgrade the network so people can continue to take for granted the energy they use every day.

However, we are committed to engaging with communities to ensure the projects deliver other localised benefits via our Community Grant Programme and environmental benefits via biodiversity net gain (i.e. increasing biodiversity in the area we are operating in above what is currently there).

14. What is the Community Grant Programme?

The Community Grant Programme is run by the NGET business (**see Q2**). The programme is aimed at community organisations and charities in areas where our work is impacting local people through our operations and construction activities.

Communities impacted by construction work for new infrastructure projects (e.g. the building of new underground tunnels or a new substation resulting in a significant increase in heavy goods traffic, noise and other impacts) can apply for grants of up to £20,000. More information regarding our Community Grant Programme and who is eligible can be found on the National Grid website.

15. How will the Navenby Substation contribute to the UK's journey towards net zero?

Navenby Substation, like all substations across the country, would enable electricity to be transmitted at different voltages, securely and reliably. This process enables electricity to be transmitted throughout the country and then distributed throughout local neighbourhoods and into our homes and businesses. We need to make changes to the network of overhead lines, pylons, cables and other infrastructure that transports electricity around the country, so that everyone has access to the clean electricity from these new renewable sources.

To connect several proposed solar farms in the area, including Springwell Solar and Fosse Green, a new 400 kV substation is needed.

To this end, the proposed substation will perform a crucial role in enabling the effective delivery of net zero by ensuring new renewable energy generation makes its way from where it is generated to where it is needed.

16. Is living next to a substation safe?

Electric and magnetic fields (EMFs) are produced from all electrical equipment, including overhead lines, cables and domestic electrical appliances. They are around us, in our homes, places of work and wherever else electricity is used. Electric fields are proportional to the voltage used in the equipment and magnetic fields are proportional to the electrical current flowing through the equipment.

In past years there has been some debate about whether living next to substations – and indeed power lines – is safe, because of the electromagnetic fields (EMFs) they produce.

No negative health effects relating to exposure to EMFs have been established. However, despite over 30 years of research, there is still some uncertainty in the science surrounding this subject. National Grid fully recognises people's concerns and takes this issue very seriously.

The safety of the public, local communities and our employees is central to everything National Grid does. In the case of EMFs, we commit to following the guidance on safe levels of exposure given by the Government and authoritative independent scientific organisations, such as Public Health England. For further information on EMFs please visit the website [emfs.info](https://www.emfs.info) or contact our helpline on **0845 702 3270** or emfshelpline@nationalgrid.com.

17. Have you considered the environmental impact of the project?

We are carrying out assessments for the proposed substation, evaluating its impact on the local environment. These assessments will help us to understand what mitigations we need to put in place to help reduce our impact on the local environment.

We are also committed to ensuring a minimum of 10% Biodiversity Net Gain, which means that the local environment will be left in an improved biodiverse state than before the start of the project. This will be achieved by a range of measures, such as habitat creation and enhancement for protected species.

We will have carried out comprehensive environmental surveys ahead of submitting our planning application to fully evaluate the impact of the proposed substation.

18. Will there be any noise, and dust during construction?

Ahead of the project starting, we will complete environmental surveys. If the planning application is approved and construction work begins, we will ensure that any dust, noise, and vehicle movements are appropriately mitigated. Minimising disruption is a key part of our responsibility to the communities in which we work but also the safety of others in and around this area. We will also work closely with the council to manage this and make sure we are working within our standard working parameters.

19. What will be the impact on the local wildlife?

We will be carrying out ecological surveys to assess the area and are therefore taking all necessary precautions to ensure minimal disruption to wildlife. We will also minimise the loss of any trees in line with our schedule 9 commitments.

20. Will there be any footpaths closures?

There are no foreseeable requirements to close or suspend any of the local footpaths.

21. How was the proposed location selected?

We have identified this site as the best option through a formal substation siting study, where five possible sites were shortlisted. From these five evaluated sites in the local area, a rigorous optioneering process was carried out, taking into consideration the impact on the local community, proximity to the existing overhead line to reduce the need for new pylons, environmental factors, land availability and other key measures. Through consideration of all of these factors, the site 1.4km from Navenby was selected as the most suitable location.

22. How sustainable will the substation be?

Our aim is to build as sustainable a substation as possible. The exact details of this are still to be determined.

Infrastructure and construction

23. How will you minimise the impact of construction traffic on the local road network during construction?

Travel to the site, both during construction and once the site is operational, will be via the A15 and Heath Lane. Construction traffic will not be directed through Navenby village. There will be a temporary speed limit of 30mph along Heath Lane during construction, this is to enhance safety due to slow-moving vehicles entering and exiting the site. We will provide clear signage to make sure our construction traffic uses the agreed route and we will emphasise to our employees and contractors the special care that they need to take when driving to and from the substation.

24. What will be the hours of construction?

Details of our working hours will be included within our Construction Management Plan, which will be submitted as part of our planning application.

25. Will there be any late-night working?

We anticipate that the majority of our work will be completed within our standard working hours, however, there may be exceptional circumstances where work is carried out outside of these hours. In this instance, we would contact any residents or businesses that are affected by this prior to the works taking place.

26. What landscaping or tree planting will there be around the site to reduce visual impact?

We will carry out a landscape and visual assessment and appropriate screening will be put in place to reduce the visual impact of the site.

27. Will there be local power cuts whilst the works are carried out?

No, the work will have no impact on your electricity supply. The work that we need to carry out is on part of the national transmission system and has no direct effect on homes, businesses, schools and other premises in the local area.

28. Will there be any abnormal loads/supergrid transformers delivered to site?

Where abnormal loads are delivered to site resulting in temporary traffic measures, we will write to local residents and businesses to inform them of this. All abnormal load deliveries will be transported via the A15 and not brought through the local village.

29. How will I be kept informed during construction?

Depending on where you live and work, the impact of construction will vary. While our project is still in its early stages, we intend to keep the community informed of our plans. This will include engaging with residents and stakeholders before and after the planning application has been submitted. Our community relations team will be available throughout the project and can be contacted via email or telephone. The hotline is available between 9am and 5:30pm Monday to Friday with a voicemail service used outside these times. A member of our team will then aim to come back to you as soon as possible.

Coordination with other projects and consultation

30. How is your project linked to the proposed solar farms?

In the Navenby area several developers have requested new power connections from National Grid, and as a regulated business, we have a legal obligation to meet these requests. The ESO provides connection agreements to developers. Due to the number of requests in the local area, a new substation is required to connect these developers.

31. What are you consulting on?

We are consulting on our proposed National Grid substation, close to Navenby village and the application is specific to the substation. We will submit our planning application to North Kesteven District Council. The solar farms proposed for the local area are not part of our planning application as they are separate organisations. They will undergo a separate consultation and consenting process.

32. If the associated solar farms in the area are not built, will the substation project continue?

In the Navenby area several organisations have requested new power connections to the national grid network, and as a regulated business, we have a legal obligation to meet these requests. If the new power connections are no longer needed, the necessity for the substation will be assessed.

33. What are the next steps?

We will be analysing your feedback and refining our proposals ahead of submitting a planning application in Spring 2025. Following this, our current timeline for this project has construction beginning on site in Summer 2026.

34. How can I share my thoughts?

You can share your feedback on our plans using one of the printed feedback forms at our public consultation or submit your feedback online through our website. You can also download a form on our website and return to us by post at Freepost GIVE YOUR VIEW (No stamp or further address details are required). Alternatively, please get in touch and we will post one to you.

35. How can I find out more about the project?

If you have any questions, you can contact our community relations team via email navenby@nationalgrid.com or telephone **0800 319 6183**. The hotline is available between 9am and 5:30pm Monday to Friday with a voicemail service used outside these times. A member of our team will then aim to come back to you as soon as possible. Please do not hesitate to contact us regarding any queries.

Contact us

Our dedicated community relations team are on hand to answer any questions you may have about the proposals. Please do not hesitate to contact a member of the team on:

0800 3196 183 (Monday to Friday, 9am – 5:30pm)

Email navenby@nationalgrid.com

Freepost **GIVEYOURVIEW**
(no stamp or further address required)

To read more about the project, please visit our website or get in touch – all the latest information and consultation materials can be found on our website nationalgrid.com/Navenby