

TRANSMISSION

# Hurlie 400kV Substation

# Pre-application consultation feedback event

June 2024





ssen-transmission.co.uk/hurlie

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# The consultation events will be taking place on:

Monday 10 June, 2–7pm, Auchenblae Village Hall, Auchenblae Tuesday 11 June, 2–7pm, Drumlithie Village Hall, Drumlithie Thursday 13 June, 2–7pm, Stonehaven Town Hall, Stonehaven



# Powering change together

The time has come to further enhance Scotland's energy infrastructure, providing power for future generations as we move towards net zero.

The shift to a cleaner, more sustainable future is about more than climate change. It's about ensuring future generations have the same opportunities to thrive as we have all had.

Countries around the world are investing in their energy infrastructure to support the demands of modern economies and meet net zero targets. The UK is leading the way in building a modern, sustainable energy system for the future.

# We all have a part to play

When it comes to net zero, we have to be in it together. The UK and Scottish Governments have ambitious net zero targets, and we're playing our part in meeting them.

We work closely with National Grid Electricity System Operator to connect vast renewable energy resources harnessed by solar, wind, hydro and marine generation to areas of demand across the country. Scotland is playing a big role in meeting this demand, exporting two-thirds of power generated in our network.

But there's more to be done. By 2050, the north of Scotland is predicted to contribute over 50GW of low carbon energy to help deliver net zero. Today, our region has around 9GW of renewable generation connected to the network.

At SSEN Transmission, it is our role to build the energy system of the future.

We're investing **£20 billion** into our region's energy infrastructure this decade, powering more than ten million UK homes and 20,000 jobs, 9,000 of which will be here in Scotland.



# Find out more

Scan the QR code with your smartphone to find out more about how these policies have been assessed and determined.

# Hurlie 400kV substation pre-application consultation feedback event





# Who we are

We're responsible for maintaining and investing in the electricity transmission network in the north of Scotland. We're part of SSE plc, one of the world's leading energy companies with a rich heritage in Scotland that dates back more than 80 years. We are also closely regulated by the GB energy regulator Ofgem, who determines how much revenue we are allowed to earn for constructing, maintaining and renovating our transmission network.

### What we do

We manage the electricity transmission network across our region which covers a guarter of the UK's landmass, crossing some of the country's most challenging terrain. We connect renewable energy sources to our network in the north of Scotland and then transport it to where it needs to be. From underground subsea cables and Overhead Lines (OHL) to electricity substations, our network keeps your lights on all year round.

# Working with you

We understand that the work we do can have an impact on our host communities. So we're committed to minimising our impacts and maximising all the benefits that our local developments can bring to your area.

We're regularly assessed by global sustainability consultancy AccountAbility for how we engage with communities. That means we provide all the information you need to know about our plans and how they will impact communities like yours. We want to hear people's views, concerns, or ideas and harness local knowledge so that our work benefits their communities: today and long into the future. You can share your views with us at: ssen-transmission.co.uk/talk-to-us/contact-us

# The Pathway to 2030

Building the energy system of the future will require a delivery of significant infrastructure over the next few years. In partnership with the UK and Scottish Governments, we're committed to meeting our obligation of connecting new, renewable energy to where it's needed by 2030.

# Achieving net zero

By 2030, both the UK and Scottish Governments are targeting a big expansion in offshore wind generation of 50GW and 11GW respectively. The Scottish Government has also set ambitious targets for an additional 12GW of onshore wind by 2030.

Across Great Britain, including the north of Scotland, there needs to be a significant increase in the capacity of the onshore electricity transmission infrastructure to deliver these 2030 targets and a pathway to net zero.

# **Securing our energy future**

And it's not just about net zero. It's also about building a homegrown energy system, so that geopolitical turmoil around the world doesn't severely impact the UK and push up energy prices. The UK Government's British Energy Security Strategy further underlines the need for this infrastructure, setting out plans to accelerate homegrown power for greater energy independence. The strategy aims to reduce the UK's dependence on and price exposure to global gas wholesale markets through the deployment of homegrown low carbon electricity generation supported by robust electricity network infrastructure.

# Meeting our 2030 targets

In July 2022, National Grid, the Electricity System Operator (ESO), published the Pathway to 2030 Holistic Network Design (HND).

This sets out the blueprint for the onshore and offshore transmission infrastructure that's required to support the forecasted growth in the UK's renewable electricity. It's an ambitious plan that will help the UK achieve net zero.

# What does this mean for you?

The East of Scotland will play a key role in meeting these goals. The extensive studies that informed the ESO's Pathway to 2030 HND confirmed the requirement to increase the power transfer capacity of the onshore corridor from Kintore to Tealing.

As part of these plans, we're proposing to build a new 400kV OHL between Kintore and Tealing. This also requires two new 400kV substations to be constructed in Fetteresso Forest and at Tealing to enable future connections and export routes to areas of demand.

In addition, two of the existing 275kV OHLs out of the existing Tealing substation to Alyth and Westfield require upgrades to 400kV operation and to be connected to the proposed new Emmock 400kV site near Tealing.

These five projects, collectively called Kintore to Tealing 400kV projects, are seen as critical to enable the delivery of the UK and Scottish Government's targets.

These five projects are:

- Kintore Tealing 400kV OHL
- Hurlie 400kV substation
- Emmock 400kV substation
- Alyth Tealing 400kV upgrade
- Tealing Westfield 400kV upgrade

# **Future network** investment requirements

Our 2030 targets are the first step on the transition to net zero. The UK Government has a target to decarbonise our electricity system by 2035 and fully decarbonise our economy by becoming net zero by 2050, with the Scottish Government committing to net zero five years earlier, by 2045.

To achieve these targets, further investment in new low carbon electricity generation and the enabling electricity transmission network infrastructure will be required.

The next stage of strategic network planning across Great Britain has now been outlined in the independent Electricity System Operator, National Grid ESO's, 'Beyond 2030' report, published in March this year. For the north of Scotland, the ESO's plan recommends several new and upgraded onshore and offshore reinforcements that the ESO has assessed are required to help deliver net zero targets.

These projects, which will be subject to extensive public consultation, are at the very early stages of development and further details will be set out in due course





# The story so far



# Help shape our plans

The work we have planned is significant and has the potential to deliver benefits in your community, Scotland, and beyond. Yet we know that achieving our goals will require a lot of work that will impact your lives. That's why we want to work with you every step of the way throughout the planning and delivery stages of these essential and ambitious works.

We're committed to delivering a meaningful consultation process that actively seeks the views of everyone affected by our plans. That means making our plans clear and easily accessible, so that you can give us input throughout each stage of the development process.

Throughout the consultation, we'll present our approach to developing the project, including changes made since we last consulted with you. We will also provide some visualisations and maps to show you where everything will be located and to allow you to see what the proposed substation will look like. These will all also be available to view and download from our project website.

# Who we are consulting with

As well as communities, we are keen to hear feedback from a broad range of other stakeholders including but not limited to landowners, businesses, non-statutory consultees, and statutory consultees such as local authorities, NatureScot, Scottish Environment Protection Agency (SEPA), Historic Environment Scotland (HES) and Scottish Forestry.



# What we are seeking views on

We want you to share your thoughts and opinions on our plans, where you think we can make improvements, concerns about the impact of our work and what you think of the refinements or changes we've made.

This event is the second of two planned, sequential, public consultation events following the submission of the Proposal of Application Notice (PAN). The PAN submission triggered the initial formal Town and Country Planning (major application) consultation process for this site, including the 12-week (minimum) pre-application consultation period.

Following the initial consultation event, the project team has sought to ensure that comments or concerns raised have informed, where possible, the primary considerations for the designs as they have progressed. This includes substation layout design, landscaping enhancement and screening. Outside of the formal consultation periods and events, we have continued to provide a dedicated webpage for the projects and liaise with a wide range of stakeholders to help inform the development and design.

We are therefore holding this feedback event to present our proposed substation design, which has been informed by stakeholder feedback, and have set out our responses to feedback received to date.

By telling us what you think, you will help shape our proposals. We want to harness your local knowledge so that we spot any unforeseen challenges early and maximise the potential benefits and opportunities for your communities. Because, ultimately, we want to work with you to ensure that the energy infrastructure we build will be the best it can possibly be.

# Hurlie 400kV substation pre-application consultation feedback event

Councillors and Community Councils.



The first of three public consultation events trigged by the submission of the PAN were held in Stonehaven, Drumlithie and Auchenblae.



# **Project overview**

We're leading some exciting projects to power change in the UK and Scotland. To support the delivery of 2030 offshore wind targets set by the UK and Scottish Governments, and to power local communities, we need to upgrade our existing network. In some key areas, we need to develop entirely new infrastructure, and quickly.

# The new 400kV OHL between Kintore and Tealing

Based on the requirements outlined in National Grid ESO's Pathway to 2030 Holistic Network Design we have developed proposals to reinforce the transmission system. As part of this we are proposing to establish a new 400kV OHL between Kintore and Tealing. ssen-transmission.co.uk/tkup

This requires two new 400kV substations to be constructed to connect to this new OHL, one at Fetteresso Forest in Aberdeenshire and one near the village of Tealing in Angus to enable required future connections and export routes to areas of demand.

In addition, two existing OHLs out of Tealing substation to Alyth and Westfield in Fife will be upgraded to operate at 400kV and connected into the new proposed Emmock 400kV substation.

While they have been presented in combined consultation events in May last year, they are separate projects and will be progressed through separate consenting processes

# Hurlie 400kV substation

This consultation is focused on the new 400kV substation in Aberdeenshire which will be known as Hurlie, as part of the Kintore to Tealing 400kV projects.

Feedback to our previous consultation, which was held in May 2023, resulted in a review of our original proposed site at Fiddes. Following detailed assessment of environmental, technical and engineering/cost factors, a new location in Fetteresso Forest has been selected as the proposed site option to be taken forward into the design and consenting process.

The new proposed Hurlie substation will be an outdoor, Air Insulated Switchgear (AIS), 400kV substation with approximate dimensions of 685m x 300m with height up to 14.3m, not including the groundworks required to create a level platform.

A single storey control building (maximum height 7m) which contains ancillary equipment will be required to operate the substation including control panels and low voltage AC and DC systems.

Currently, the tallest equipment in the substation will be the busbar at approximately 14.5m. There may be a requirement in the future that the proposed reactors are replaced with larger network stability equipment which can be up to 18m tall with a footprint of approximately 95m x 45m

The design covers a range of considerations, including:

- Plant and equipment required for current network plans.
- Space provision to allow for connection of future renewable energy generation projects.
- Areas for drainage, landscaping/screening and habitat enhancement.
- · Permanent and temporary access roads.
- Temporary areas required during construction for laydown and welfare.

# **Planned connections to Hurlie**

The following proposed new electricity transmission infrastructure will require a connection to the new Hurlie substation

- The proposed Kintore to Tealing 400kV OHL connection. This will comprise an OHL from the south, from Tealing and an OHL from the north, from Kintore.
- A connection by Bowdun Offshore Wind Farm. The Developer is expected to locate its own, separate substation in the vicinity of the proposed Hurlie substation. It is likely that an underground cable will connect the Developers' substation with Hurlie substation
- A connection to the Offshore Grids Projects. This is an SSEN Transmission project. Please refer to Other SSEN Transmission projects in the local area section of this booklet.

All of the above connections are subject to separate consultation and consenting processes.





Following submission of our Proposal of Application Notice (PAN) in January 2024, notifying our intentions to apply for planning permission for the new proposed Hurlie substation, the first of two formal pre-application consultation (PAC) events was held at Drumlithie Village Hall on 19 March 2024. A total of 118 members of the public attended.

Events were also held at Stonehaven Bowling Club on 11 March 2024 and Auchenblae Village Hall on 21 March 2024 where we presented information on our proposed substation with 175 and 107 attending respectively. While not advertised as formal PAC events, these were a response to requests from the local communities to extend our consultation.

The feedback from all three events has been included in the analysis and our responses presented here. While the feedback period for Hurlie closed on 30 April 2024, we have continued to receive responses via direct email and through our on-line link. At the time of finalising this booklet, we have received 1,958 responses. While the majority of these relate, and set out clear objections to the Kintore to Tealing 400kV OHL, we received 280 community responses which explicitly referred to the proposed substation.

The chart below shows the frequency of issues raised by broad theme, with most responses raising issues relating to environmental and community impacts. The second chart shows the frequency specific issues were raised. 54% raised concerns relating to wider environmental impacts, 53% referred specifically to visual impacts, and 49% concerning effects on health. The need to address undergrounding was referred to in 28% of the responses although this is likely to refer to the proposed overhead line rather than the proposed substation. 27% of respondents challenged the cost benefit assumptions of the Project and 26% commented on our consultation and communication processes.

No responses supported the proposed substation, although several attendees at the consultation event did say they supported the transition to net zero, but not the approach to enabling it.

# Figure 1: Hurlie 400kV substation points raised by category



Figure 2: Hurlie 400kV substation most frequently raised points



The community feedback and our responses are set out below.

In addition to community feedback we also received responses from statutory and non-statutory consultees which we also summarise in the section below.

In addition, in the following pages, we also show updates to the substation design, and explain how those have aimed to address the feedback. We also present new information to explain how the construction and development of the substation would likely be progressed and how controls to reduce impacts on the community and environment will be put in place.





# Feedback from statutory and non-statutory consultees

Our consultation booklet published in April 2024 to support our formal consultation events, was issued to Aberdeenshire Council, Historic Environment Scotland (HES), NatureScot, Scottish Environment Protection Agency (SEPA), Community Councils and various non-statutory consultees.

HES welcomed the fact that the EIA will include an assessment of the impact of the project on designated heritage assets and the inclusion of a cumulative impact assessment. It noted specific heritage assets in the area and pointed to the need for an assessment on the setting of key assets. NatureScot noted the presence of schedule 1 birds in the area and the need to address how disturbance during breeding would be avoided.

In relation to biodiversity enhancement and NPF4 Policy 3, NatureScot encouraged that biodiversity enhancement should be a integral part of the project from the outset.

SEPA welcomed the work undertaken to demonstrate the absence of peat across the site and the objectives in the drainage design to avoid impacts on the Burn of Day, Burn of Baulks and Cowie Water and to avoid introducing a flood risk into the catchment.

No responses were received from Aberdeenshire Council, although it has provided regular feedback in response to the regular engagement we hold with all the statutory consultees. National Gas Transmission advised of the need to ensure we engage with them as the proposals develop to ensure no conflicts with national infrastructure.

That engagement has been ongoing since 2022 and will continue throughout the design and planning processes. Scottish Water confirmed the absence of major assets in the area. Scotways highlighted the presence of the Scottish Hills and Heritage Paths network.

Responses were received from Mearns Community Council (MCC), Crathes, Drumoak and Durris Community Council (CDDCC) and Stonehaven and District Community Council (SDCC), the second and third including specific responses on the proposed substation.

The former raised comments regarding the consultation process and that the views of the community were not being taken into account and expressed its objection to the wider project. CDDCC's comments regarding the proposed substation addressed the potential for future connections to the substation, the impact on woodlands and wildlife and the consultation process. It included the results of a community survey, much of which addressed matters relating to the overhead line, but which demonstrated strong community interest and engagement and opposition to the wider project. SDCC's representations, which included responses to our feedback form, and a separate submission, set out several areas of concern: the consultation process and the need to clarify and consult on possible later projects identified by ESO and other future connections such as battery storage; project need; and concerns about wider environmental impacts relating to noise, construction, impacts on amenity and on wildlife.



# **Feedback and Responses**

# Event feedback

### General

Noise

While many responses

highlighted concerns about

substation, several attendees

and respondents raised the

specific issue of noise, from

both the proposed substation

and in combination with the

proposed overhead line.

the general environmental impact of the proposed

environmental impact The potential impact on the wider environment was referred to in over half of the responses.

# Response

This is a broad category and many of the specific concerns relating to landscape and visual impact, impacts on wildlife, noise, flooding and construction traffic are addressed separately on this and the following pages.

Minimising the environmental impact of the substation has been a key objective from the outset, and a major driver in the site selection process and in the eventual selection of Hurlie, following feedback to our May 2023 consultation on our original preference near Fiddes and as a result of further analysis.

Compared to other options that were considered, Hurlie is favoured as having no direct impact on cultural heritage features. It is well screened with very limited visibility from nearby properties, and contained within the landscape. While impacting commercial plantation, it avoids the loss of agricultural land. The forest provides habitat for red squirrel and other species, but the loss of habitat is not extensive and unlikely to impact the health of local bird and mammal communities. It is separated from properties so that noise is very unlikely to be noticeable. Additionally, the risks of flooding to the Stonehaven community will be avoided through the drainage design.

While not referenced specifically in the feedback, several attendees at the consultation events raised concerns about the combined impacts of the project with other projects proposed in the area and asked that we share information on other SSEN Transmission projects, even if at much earlier stages.

Planned connections to Hurlie substation are listed on page 6. As well as assessing the cumulative impacts of the substation and the proposed 400kV overhead line, the Environmental Impact Assessment will also consider the potential for cumulative impacts arising in combination with other planned connections, where impacts are anticipated. The same is true of other projects in the local area which are summarised on pages 21-23, and the cumulative impact assessment will consider the effects of the substation in combination with other planned developments where they may be combined impacts on receptors over time, and subject to sufficient information on those projects at the time the Environmental Impact Assessment Report is prepared.

The site is already well screened with limited potential for direct lines of sight where noise could be greatest. The nature of the groundcover in the area and its undulating topography will significantly reduce noise exposure to nearly properties.

Nevertheless, we are committed to making sure that noise levels experienced by local residents will be no greater than they are today. Specialist acoustic consultants have been appointed to carry out a Noise and Vibration Impact Assessment which will predict the levels of noise during construction and once the proposed substation is commissioned and under load, and which will also take into account noise from the proposed overhead line which can be audible in certain weather conditions. Should the assessment suggest that noise will be noticeable at nearby properties, the source of noise will be enclosed and if necessary other measures such as barriers and screens will be incorporated into the design to attenuate noise.

### Event feedback

Response

### Flooding

Several attendees at the event highlighted the issue of flooding in Stonehaven and were concerned that the proposed substation would increase the risk.

The proposed substation site sits in the upper catchment of the Cowie Burn, in between the Burn of Day and the head of the Burn of Baulks. It will be a condition of any planning consent that a drainage system is established which will intercept and slow drainage from the substation site. Run off will be reduced at source by the outset by ensuring a permeable substation platform and establishing large areas of natural vegetation which will intercept run off.

The drainage design will ensure that the rate and volume of surface drainage across the site is no greater than it is at present. An initial Flood Risk Assessment has been undertaken and established that there are no material flood risks associated with the burns in the vicinity of the site. This work will continue and a full Flood Risk Assessment will be presented in the Environmental Impact Assessment together with any mitigation should it be required.

### **Construction traffic**

Several attendees and respondents raised concerns about the level of construction traffic coming through west Stonehaven and the impact on pedestrians and other road users. Several attendees pointed out the constraints on Slug Road.

We recognise that construction traffic can be a significant concern to other road users and the wider community, in terms of safety, noise and dust. While we are yet to finalise our assessment, we are examining the feasibility of routing construction traffic from both north and south via the A90 AWPR (Aberdeen Western Peripheral Route), the B9077 Peterculter to Crathes, and from Crathes, via the A957; the intention being to avoid or substantially minimise traffic through west Stonehaven.

Peak movements will occur during site establishment when the Contractor is bringing plant and equipment to site. This phase is likely to continue for 12 months. Some deliveries of hardcore will be required at the start to surface the construction compound. A Construction Traffic Management Plan will be one of the many requirements of any planning permission. This will prescribe the routes to be taken by contractors and may restrict the use of some local roads in addition to when deliveries can be made. It would also likely define requirements to undertake repairs in the event of damage to road surfaces, culverts, ditches and verges.

A Community Liaison Group would be established by the Contractor to provide a forum to ensure traffic impacts are minimised.

# Event feedback

### Visual impact

Many attendees and respondents are concerned about the impact the proposed substation will have on views from their properties. Concerns about visual impact accounted for 53% of all the issues raised by respondents.

Response

project further.

Apart from the terminal connection towers which will be between 40m and 60m in height, the overall height of the electrical infrastructure will be approximately 14m; with the possibility that a single plant component may be 18m tall, although the need has not been determined.

The benefit of the Hurlie site is that it is well screened. The indicative landscape design shown on page 18 provides further detail on the nature and extent of new woodland planting which will aim to screen visibility further. It is expected that the landscape plan will be secured as a condition of the planning consent and the site development will be phased to retain existing trees around the perimeter of the site and to enhance visual screens as material is excavated.

The potential impacts of the project on the wider landscape and on visual amenity will be assessed fully in the Environmental Impact Assessment Report that will accompany the planning application.

### Health and wellbeing

The impact of the substation and of the wider overall project on health and mental wellbeing was raised by several attendees at the consultation events and in just under half of all responses received.

We are mindful of the uncertainty that our proposals can pose to communities who may be affected. Our process for project development seeks to identify options that provide an appropriate balance across a variety of considerations and interests. We aim to do this as swiftly as possible to minimise the duration of uncertainly for affected communities. However, we are also committed to providing sufficient time and opportunity for all stakeholders to feed into each stage of our project development process, so that views can be understood and wherever possible incorporated into design decisions. This is a balance which has to be carefully managed. We understand that everyone may be impacted in different ways and would be interested in residents' views regarding any additional activities that would help to address their specific concerns.

Our responses to these topics can be found at ssen-transmission.co.uk/2030faqs

Our statement on Electric Magnetic Fields (EMFs) can also be found here ssen-transmission.co.uk/emf



# Hurlie 400kV substation pre-application consultation feedback event

Since our last consultation event, together with our engineering and environmental consultants, we have been examining how we can reduce the scale of the proposed substation platform (which would house the new electrical infrastructure). As a result of detailed assessments, we now plan to reduce the platform length from 760m to 685m; the width is likely to remain the same currently at 300m, although further design work is on-going and will continue after the submission of the planning application to reduce the scale of the

### Event feedback

Response

### Wildlife

A number of respondents questioned the impact the proposed development would have on wildlife.

A key driver in the site selection process was to avoid sites which could impact legally protected and locally designated wildlife sites, and avoid land with a rich biodiversity. While the site is currently commercial plantation, there are pockets of natural habitat. We are aware that there are frequent sightings of red squirrel in Fetteresso forest. Extensive ecological and ornithological surveys of the site and surroundings have been completed to characterise habitats present and to assess and record the likely presence of key species. These will inform the detailed mitigation plans and impact assessments which will be undertaken as part of the Environmental Impact Assessment. In addition to the mitigation requirements determined through the impact assessments, we have a company wide commitment to deliver a 10% gain in biodiversity across our major projects. This will be integrated into the proposed development, specifying a diverse range of new wildflower, shrub and tree planting as part of the landscape design. In addition, we are required to compensate for any woodland removal, including of commercial plantation, by securing opportunities for compensatory new planting to ensure no net reduction of woodland.

### **Property values**

Several attendees at the event expressed concern about the effect of the proposed substation on the values of their homes and their ability to sell, should they wish to.

We understand that there are concerns about the potential impact of our proposed developments on properties within the vicinity of our proposed overhead line alignments and substations sites. Throughout the development of our proposals at Hurlie, we have engaged with property owners and listened to their concerns on this issue.

We will look to mitigate impacts on residential properties as far as possible and these impacts will be assessed as part of the Environmental Impact Assessment. We have carried out extensive surveys at identified receptors, including selected residential properties so that we are able to model potential impacts on the wider area. Concerns in relation to impacts on property are being noted by our team. However, as a regulated business, we are obliged to follow a statutory legal framework under the Electricity Act 1989 and Land Compensation Act 1961.

For those entitled to compensation under the legal framework, we will assess any claim on a case-by-case basis under the direction of this legal framework. Further information is available here ssen-transmission.co.uk/ landowners-and-occupiers

### Socio-economic impacts

Several respondents raised the potential impact of the proposed development on the community and local economy, with the issue referenced in 31% of all responses. As part of wider concerns, specific mention was made to the impact on local tourism businesses.

We are in the process of establishing a Community Benefit Fund which will enable us to work directly with local communities to support initiatives across northern and eastern Scotland. We want to give back to the communities hosting our transmission network and to help fund projects that can leave a lasting, positive legacy in those areas.

In terms of broader community benefits, our Pathway to 2030 projects will boost the economy, and support local jobs and businesses. Recent studies show our Pathway to 2030 programme could contribute over £6 billion to the UK's economy, support 20,000 jobs across the UK and benefit Scotland by around £2.5 billion, supporting 9,000 Scottish jobs. We typically hold 'Meet the Buyer' events prior to the construction phase to connect our Principal Contractors with local businesses and this has proven to be an effective means of sharing the economic benefits of our projects with local communities. We are also actively seeking opportunities to accommodate our workers in a way that provides a range of local benefits. We have prepared an information pamphlet which describes the benefits we anticipate from our projects and our thinking on how community benefit funding might work. Further information on our proposals is available here: ssen-transmission.co.uk/legacy-benefits

# Event feedback

### Amenity

Respondents raised concerns about the impact of the project on amenity, citing specific concerns on the project's impact on the network of footpaths and cycle routes through the Forest, and the communities enjoyment of them for recreation and health.

### **Cost and benefits**

The issue of costs was mentioned in 27% of the responses received. In most of these cases, attendees and respondents challenged the cost-benefit analysis of the project arguing that project decisions have been based on the cheapest options.

### Consultation process

The consultation process adopted was raised in 26% of the responses, a common point being that insufficient information was provided and insufficient time given to communities to respond.

Many respondents questioned their ability to influence the project, expressing the opinion that the decision to proceed was already made.

Concerns were raised at the absence of consultation by the ESO in defining future energy needs, and how they should be met and the rationale for the wider project.

### **Future connections**

While not a widespread concern in written responses, many attending the consultation events sought clarity on other developments connecting into the proposed substation.

## Response

In selecting the best site for the substation, we have sought to balance a range of engineering and technical considerations alongside environmental issues, including landscape and visual, ecology and hydrology together with amenity. While disruption to a number of existing forest tracks which are also used for recreation will occur during the construction phase, the construction access routes created will be retained after construction and will be connected to the existing network of tracks, increasing the availability and choice of cycle and walking routes once construction is complete. It may be necessary to temporarily close or divert some tracks during the construction, in much the same way as forestry operations do at present. Where this is the case, these will be advertised and sign-posted. The Contractor will establish a Community Liaison Group which will be a vehicle to inform and discuss track and road interruptions so that impacts to the community are minimised.

The cost of improving the electricity network is covered by GB consumers. As with the two other Transmission license holders, we have a legal duty to balance cost with environmental, technical and societal factors. We carry out cost-benefit analysis on all projects, and the lowest cost is not always selected. Minimising environmental impact or ensuring technical viability may sometimes outweigh cost factors. At Hurlie for example, the engineering challenges are larger than those at other sites considered, but the environmental and community issues are less constraining.

As a regulated business, SSEN Transmission's return on investment is determined by Ofgem's regulations, irrespective of technology choices made.

We are committed to meaningful and constructive engagement with local communities and residents throughout the development process to seek input and feedback into our proposals. As we consult and develop our projects, we aim to be open and transparent with communities, engaging as early as possible to seek input into our early plans.

We share our plans in different formats and through different channels and are continuing seeking ways to improve how we share information and seek inputs.

We aim to engage as early as possible with the communities where we may have an impact. Our initial engagement in May 2023 aimed to introduce the need for and suggested location of the substation and wider project and explain the rationale for selecting the site. Our Report on Consultation in December 2023 presented our analysis of the feedback to that consultation, specifically the suggestion of Hurlie as an alternative in direct response to consultation feedback. Our formal consultation event in March this year summarised the process followed to select Hurlie and presented our proposals at that stage. We have continued to progress our design and resolve areas of community and environmental impact in the process. Our aims at this point are to share our latest designs, show how they have aimed to address feedback and highlight where design work may continue as we prepare for our planning application.

It will be for Aberdeenshire Council to determine how the substation project will proceed.

We have prepared a separate handout which explains how the need for the Project has been determined and the role of the ESO which is available here: ssen-transmission.co.uk/2030-need

Further information is provided on pages 22 and 23 where we set out possible future connection requirements, based on known development proposals, noting that all will be subject to separate consenting processes.

# The substation site

# About the site

Following our last consultation on the proposed Fiddes substation in May 2023, where we asked for your views regarding several sites, in December 2023, responding to that feedback, we confirmed that the site we were proposing to progress with was a new site in Fetteresso Forest.

Following an assessment of environmental, engineering and cost considerations, the site at Fetteresso (referred to as the "Hurlie" site) was identified as the best balance of all factors, and the proposed site option to be taken forward into the design and consenting process. It avoids direct impacts on residential properties, has limited interaction with heritage assets, limits likely significant effects on existing land-use and has potentially fewer impacts on landscape character than other candidate sites.

# What size is the site

The substation platform as currently proposed would be 685m x 300m. In addition, the proposed development will include the establishment of new landscaping, land for biodiversity enhancement, sustainable urban drainage, construction compound and set-down/equipment and materials storage areas. It will also include upgrades to the existing forestry roads to allow constriction access. While the total site area is yet to be determined, the total area contained within the Proposal of Application Notice boundary is 292 hectares.

# What else will the development consist of? Drainage

Drainage arrangements as part of the substation works will extend out with the existing substation boundary and will be included in the planning application.

### Temporary compounds

Temporary construction compounds and laydown areas will be located in the vicinity to support the construction phase. Additional temporary construction compound and laydown areas, if needed, will be identified by the construction Contractor prior to commencement of works.

# Felling and re-planting

An existing compartment of mainly exotic (non-native), conifer woodland, to the south of the switching station up to the B852 public road will require to be felled for resilience (to remove risk of toppling onto the new development) and re-planted with native broadleaved species. To allow establishment, deer fencing surrounding this compartment will be installed for a duration of approximately 10 years.



# **Overview of** key design changes



Figure 3: Substation site general arrangement

# Substation design

Since our last consultation, we have refined the substation We have rationalised and shortened the internal access design by reducing its length from 760m to 685m, narrowing tracks, removing the "hairpin" from the westernmost track, the western edge, and rounding the north east corner. and added a new section of track which skirts around the We have substantially reduced the cut at the south western south east corner of the platform before it joins the existing end, which has allowed the eastern toe of the platform to be forestry track east of the platform. significantly reduced in extent. As a result we have been able No changes to the proposed access arrangements from to reduce the overall footprint of the works area from approx. 45ha to just under 24.5ha, a reduction of some 58%. This has the A957 are proposed at this stage. Our thinking on access allowed us to increase new planting by an equivalent extent. to the site has evolved however, and is described in the construction section on page 19.

Over the coming weeks, we will continue to test different platform elevations, and orientations, as we seek to optimise the extent of cut, the requirement for fill, the overall footprint and the degree of visibility.

# **Overview of** key design changes



Figure 4: Landscape design

# Landscape and drainage design

The reduction of the platform toe has allowed the SuDS (Sustainable Urban Drainage) ponds to be repositioned and reprofiled to a more naturalistic shape more sympathetic to the landscape design. Modifying the site access road west of the platform enables the areas of new woodland block and shrub/scrub planting to be extended. The shrub/scrub planting would now extend further south and along the southern edge of the substation.

The shrub/scrub planting corridor beneath the proposed overhead line connections has been widened in both cases, due to the requirement to limit tree planting beneath the overhead lines. A key change, which results from shortening the platform and the toe, is that it significantly extends the area of new planting eastwards. Of note, the western, north and eastern edges of the platform would now be wrapped in woodland block planting, comprising a mix of deciduous and evergreen species, which will add both biodiversity and strengthen visual screening to what is already a well screened platform as a result of the topography of the site.

The wildflower meadow and wetland habitat around the SuDS ponds would be largely unchanged.

As indicated above, SSEN Transmission has a policy commitment to deliver 10% more biodiversity compared to the baseline condition. At Hurlie, while the site is predominantly immature and mature plantation, there are some pockets of semi natural and natural habitat.

Our biodiversity net gain (BNG) proposals are being developed, but the principal delivery will be through the landscape plan and the diversity of habitat and species mixes that will be delivered as part of the Plan.

Separate and in addition, we are committed to replace all woodland removed as part of our projects. We will therefore ensure that we provide compensatory planting, i.e., at least the equivalent extent of woodland removed. Our proposals for this will be agreed with the landowner.

# The construction process

# **Construction programme and activities**

The overall construction programme is three years, with a fourth year required for commissioning and testing. The broad programme and main construction Heavy Goods Vehicles (HGVs) requirements are illustrated below.

### Figure 5: Indicative high level construction programme

Activity	Estimated HGV movements/ activity duration	2026			2027					20	28		2029				
		Jan- Mar	Apr- Jun	Jul- Sep	Oct- Dec												
Mobilisation	20																
Form access road, temporary compound, clear site	220																
Install drainage, form compound	40																
Cut and fill earthworks	60																
Install 75mm whin chip and 225 type one layer over platform	6100																
Permanent Drainage	332																
Services	37																
Substation Roads	270																
Security fencing	15																
Mobilisation	50																
Concrete and Rebar delivery	920																
Delivery of primary equipment and structures	220																
Delivery and installation of transformers	50																
Building steel work and cladding	60																
Installation of secondary equipment and cabling	35																
Commissioning	10																

## **Construction access**

Since our last event, we have examined options for principal construction access which avoid the A957 Slug Road and the residential parts of west Stonehaven.

The likely principal route, which Contractors would be required to follow, from both north and south, would be the A90 AWPR, exiting at the Peterculter Junction, and joining the B9077, then joining the Slug Road at Crathes, and arriving at the principal access to the site from the north. The same route would be proposed to be used for two way construction vehicle movements.

Smaller deliveries may arrive via the Slug Road from the south. It is possible that personnel may access the site (independently or by Contractor arranged transport) from the unclassified Elfhill Road, to the south of the site.

# The construction process



Figure 6: Indicative construction access

# Managing impacts during construction

Over several years, we have developed and implemented management plans aimed at avoiding and managing construction environmental impacts. These include an overarching Construction Environmental Management Plan, individual plans to control specific aspects such as noise, dust, construction waste, working near water courses, working in different habitats, and Construction Traffic Management Plans. These will be implemented as a condition of the Principal Construction Contract. In addition, the Contractor will be required to prepare additional plans to cover specific requirements that arise through the EIA process, including a Community Engagement Plan. Effective implementation of all of these will be assured through an independent auditor that we will appoint but which will report to statutory consultees, including the local Community Councils. In that way, the community will have a direct route to ensure we and our Contractors address any issues that adversely affect the community.

# **3D visualisations**

We understand that local stakeholders need to be able to visualise what the development may look like in their local area.

We've commissioned 3D visualisations which model the proposed substation into the local landscape to help the understanding of the proposals in terms of the visual impact, distance and height.

The following are some images taken from the 3D model created for the Hurlie substation from a range of topographies.

To get a better sense of the proposals in full our consultants, 3D Webtech, will be assisting us at our consultation events with copies of the model that attendees can interact with during the events.

The layout and colour of our proposals may change based on feedback and further refinement of the design, if that happens, we'll update our model and video and share this on our webpage and with you at the next event.

# Photomontages

Photomontage visualisations will also be produced as part of the Environmental Impact Assessment (EIA).

Once the EIA is completed, we'll ensure these photomontages are easily available to view.







# Hurlie 400kV substation pre-application consultation feedback event



Hurlie - VP5 - Minor road west of Kirktown of Fetteresso

# Other projects in the local area

# Summary of projects

We know that local stakeholders are keen to understand the full extent of renewable developments being proposed in their local area.

Applications from the likes of wind farms to connect to the transmission network are made to National Grid ESO and undergo a lengthy process before we begin to develop a network connection for developments applying in our license area. We aim to be transparent about the renewable developments looking to connect to our network but are not permitted to disclose any details of these developments until they are in the public domain.

A list of projects that hold contracts for Transmission Entry Capacity (TEC) with National Grid, the Electricity System Owner is available from their website: nationalgrideso.com/data-portal/transmissionentry-capacity-tec-register

### Figure 7: Other Projects in the area



We have noted the proposals by Bowdun Offshore Wind Farm, which is likely to connect to the proposed Hurlie substation. At this time, we are not aware of other third party projects likely to connect to Hurlie.

The area highlighted as potential for offshore connections to Hurlie is indicative only. Both planned offshore connections are at a much earlier stage of development. The area identified in orange is intended to provide an indication of a possible location. This is not a commitment that either of these connections will progress using this area of land.

We are aware of the application to the Energy Consents Unit by Hill of Fare Wind Farm.

While the wind farm connection is yet to be determined, it is likely that SSEN Transmission will provide a connection to the transmission grid via the existing Fetteresso substation or Kintore substation. This has yet to be determined along with a date of connection.

# Other SSEN Transmission projects in the local area

# Glendye wind farm OHL connection

The Glendye wind farm has received section 36 consent, and we are required to connect the development to the transmission network.

To facilitate this, we are proposing to construct a new steel trident 132kV overhead line from the substation at the wind farm approximately 8km North West of Fettercairn, to the existing Fetteresso substation, 6.5km west of Stonehaven.

# East Coast 400kV upgrade and Fetteressoo 400kV upgrade

The east coast 400kV upgrade project is the second part of the phased onshore reinforcement on the east coast.

The works comprise of re-insulation and re-conductoring of overhead lines between Kintore, Fetteresso, Alyth and Kincardine (in Scottish Power Transmission's area) to 400kV. These works are programmed to complete in 2026.

Part of these works includes the Fetteresso substation 400kV upgrade project. This project is upgrading the current operating voltage of the substation from 275kV to 400kV.

## Fetteresso extension and future connections

Due to various upcoming connections, in the area there is a requirement to extend and secure the current Fetteresso 132kV substation. The project consists of a platform extension, earthworks, upgrading equipment, installing transformers including supergrids, additional bays to facilitate all required connections and all associated protection and control upgrades. We are aiming to commence work in summer 2026 and targetting the majority of substation works completed for 2028 with works following depending on the connection requirements.

This extension has a number of drivers including:

- Connection for Network Rail as part the east coast electrification strategy. (Commence in summer 2027 and energised for early 2029).
- Reinforcements and upgrades required on the transmission network to enable contracted connections on the distribution network. (Commence in summer 2026 and conclude for summer 2028)
- Connections back to the existing Fiddes substation as part of asset management and capacity requirements. (Still subject to OFGEM approval. Targetting completion by 2031)

The contracted generation of Glendye Wind Farm is c156MW. Route consultations were held in March 2024 with alignment consultations planned for later this year. If consents are awarded, it is anticipated that this project will commence construction in the second half of 2026 with a completion date of late 2028.

You can find out more at the dedicated project website: ssen-transmission.co.uk/glendye

The project consists of upgrading existing equipment, installing new equipment, such as a larger Super Grid Transformer and associated protection and control upgrades to facilitate the increase in voltage. This project is due to commence summer of 2024 and be energised for 2026 along with the 400kV OHL upgrade.

The project is crucial in enabling larger power transmission from north to south Scotland.

You can find out more at the dedicated project websites: ssen-transmission.co.uk/fetteresso-upgrade and ssen-transmission.co.uk/ec400-upgrade

• Potential incoming onshore wind farm. (Subject to accepting a connection agreement. Connection date likely to be post 2030)

These projects are in the early phases of design and development. More information will be available in the near future on the dedicated project website. ssen-transmission.co.uk/fetteressoextension

An overview of the planned works in Fetteresso Forest can be viewed in Figure 7. Please note, all these projects are in various stages of development. The figure shows very indicative corridors based on broad geographical locations that is subject to change through the development process. The ultimate land requirements will be based on the eventual solution but likely a much narrower corridor depending on the number of circuits, capacity and technology used. This is also subject to change depending on the developer activity in the area. All projects will be subject to separate consenting processes when they reached an appropriate stage of development. Further information on these projects can be found in a separate handout, "Future Works - Hurlie and Fetteresso Substations".

# **Other SSEN Transmission** projects in the local area

# Offshore grid projects

This project is being developed by SSEN Transmission. The aim of this project is to create an offshore grid network that allows offshore windfarms to connect to the electricity grid network where they generate power i.e. at sea, as opposed to each offshore windfarm having to connect, on an individual basis, back to the onshore electricity grid network.

Technically, the offshore electrical infrastructure is a first for the UK and mirrors similar cutting-edge developments being led by European Transmission Operators. We have been working with subject matter experts, supply chain, developers and the ESO on how this can be achieved. We want to make sure that what we commit to delivering, is technically feasible and that we get this right before we consult on the location of this offshore infrastructure.

At this point in time, we expect the offshore grid projects, to consist of:

- An onshore HVDC converter station, which may connect to the proposed Hurlie substation via underground cables.
- Underground cables onshore and subsea cables.
- Offshore electrical transmission infrastructure to provide a grid connection for offshore windfarms.
- Subsea cable from the offshore electrical transmission infrastructure to England.

Onshore electrical transmission infrastructure, which includes a HVDC converter station and underground cables, is required to connect the offshore electrical transmission infrastructure to the onshore electricity grid network.

A HVDC converter station is a site which converts Direct Current (DC) to Alternating Current (AC) or DC to AC. AC is how our houses and businesses use electricity from the grid. High Voltage DC (HVDC) is a technology that allows the efficient transmission of large quantities of electricity across long distances, with reduced electrical losses compared to AC.

A HVDC converter station, typically has a footprint of 360 x 290m and the main building could be up to 29m in height.

Most of the equipment would be housed in buildings similar to those depicted in the image below.

The onshore electrical infrastructure required for this project is more defined than the offshore electrical infrastructure at this time. However, we want to share what we do know about our future project, at the earliest opportunity.

Please note that this project is in the early stages of development, and that we will be holding public consultation events, dedicated to the offshore grids projects in Autumn 2024 and early 2025.

At these events, we will provide further information about this project and we will be seeking your thoughts and opinions on our plans. If you have any comments or questions please contact OffshoreGridProjects@sse.com.



The 320kV DC 1200MW Blackhillock HVDC converter station

# Have your say

We value community and stakeholder feedback. Without this, we would be unable to progress projects and reach a balanced proposal.

# The feedback period

We intend to submit our planning application in late Autumn 2024. Our formal feedback period will close on 23 July 2024, however we will welcome final comments and from members of the public, statutory consultees and other key stakeholders regarding our proposals until we submit our planning application.

# How to provide feedback

Submit your comments and feedback by emailing or writing to your Community Liaison Manager.

# What we're seeking views on

During our last public consultation event in March 2024, we wanted to know your thoughts on our project plans, where you thought we could make improvements, and any changes and refinements we'd made.

We are now asking for any final comments or feedback ahead of submitting planning applications for the Hurlie 400kV substation project. It would be helpful to share any opportunities to deliver a local community benefit you would like us to consider.

We'll be actively looking to mitigate the impacts of the site as much as possible over the coming months, but it would be helpful to understand what you believe we should be doing to help minimise these impacts and if there are any opportunities to deliver a local community benefit you would like us to consider.

**Recite**<sup>m</sup>

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Please select "Accessibility" on our website to try out our inclusive toolbar.

# Hurlie 400kV substation pre-application consultation feedback event

# **Our Community Liaison Team**

Each project has a dedicated Community Liaison Manager who works closely with community members to make sure they are well informed of our proposals and that their views, concerns, questions or suggestions are put to our project teams.

Throughout the life of our projects, you will hear from us regularly. We aim to establish strong working relationships by being accessible to key local stakeholders such as community councils, residents' associations and development trusts, and regularly engage with interested individuals.

# **Community Liaison Manager**

**Rhiannon Merritt** Community Liaison Manager

SSEN Transmission, 10 Henderson Road. Inverness, IV1 1SN

E: TKUP@sse.com

# Additional information

The best way to keep up to date is to sign up to project updates via the project webpage: ssen-transmission.co.uk/hurlie

You can also follow us on social media

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