



Willowdale GSP

Public Consultation Events

June 2022



Scottish & Southern
Electricity Networks

TRANSMISSION

Who we are

We are Scottish and Southern Electricity Networks Transmission (SSEN Transmission), operating under licence as Scottish Hydro Electric Transmission Plc (SHE Transmission) for the transmission of electricity in the north of Scotland.



In total we maintain about 5,000km of overhead lines and underground cables – easily enough to stretch across the Atlantic from John O’Groats all the way to Boston in the USA.

Our network crosses some of the UK’s most challenging terrain – including circuits that are buried under the seabed, are located over 750m above sea level and up to 250km long.

The landscape and environment that contribute to the challenges we face also give the area a rich resource for renewable energy generation. There is a high demand to connect from new wind, hydro and marine generators which rely on Scottish and Southern Electricity Networks to provide a physical link between the new sources of power and electricity users. Scottish and Southern Electricity Networks is delivering a major programme of investment to ensure that the network is ready to meet the needs of our customers in the future.

Our responsibilities

We have a licence for the transmission of electricity in the north of Scotland and we are closely regulated by the energy regulator Ofgem.

Our licence stipulates that we must develop and maintain an efficient, co-ordinated and economical system of electricity transmission.

What is the difference between transmission and distribution?

Electricity transmission is the transportation of electricity from generating plants to where it is required at centres of demand. The electricity transmission network, or grid, transports electricity at very high voltages through overhead lines, underground cables and subsea cables.

Our transmission network connects large scale generation, primarily renewables, to central and southern Scotland and the rest of Great Britain. It also helps secure supply by providing reliable connection to the wider network of generation plans.

The electricity distribution network is connected into the transmission network but the voltage is lowered by transformers at electricity substations, and the power is then distributed to homes and businesses through overhead lines or underground cables.

Overview of transmission projects



Project need and overview

Project requirement

The existing substation at Willowdale Place supplies the distribution network in eastern Aberdeen, and was constructed in the late 1960s. All of the outdoor electrical plant has now reached the end of its design life, with the impact of the coastal environment having taken a considerable toll on their condition, meaning maintenance is becoming increasingly challenging. The original design of the substation does not have the functionality of what would be built nowadays, so the proposal is to bring the entire site up to date, with an improved arrangement of modern plant, housed indoors. This will provide a network capable of the demands of the country's net zero ambitions.

Main elements:

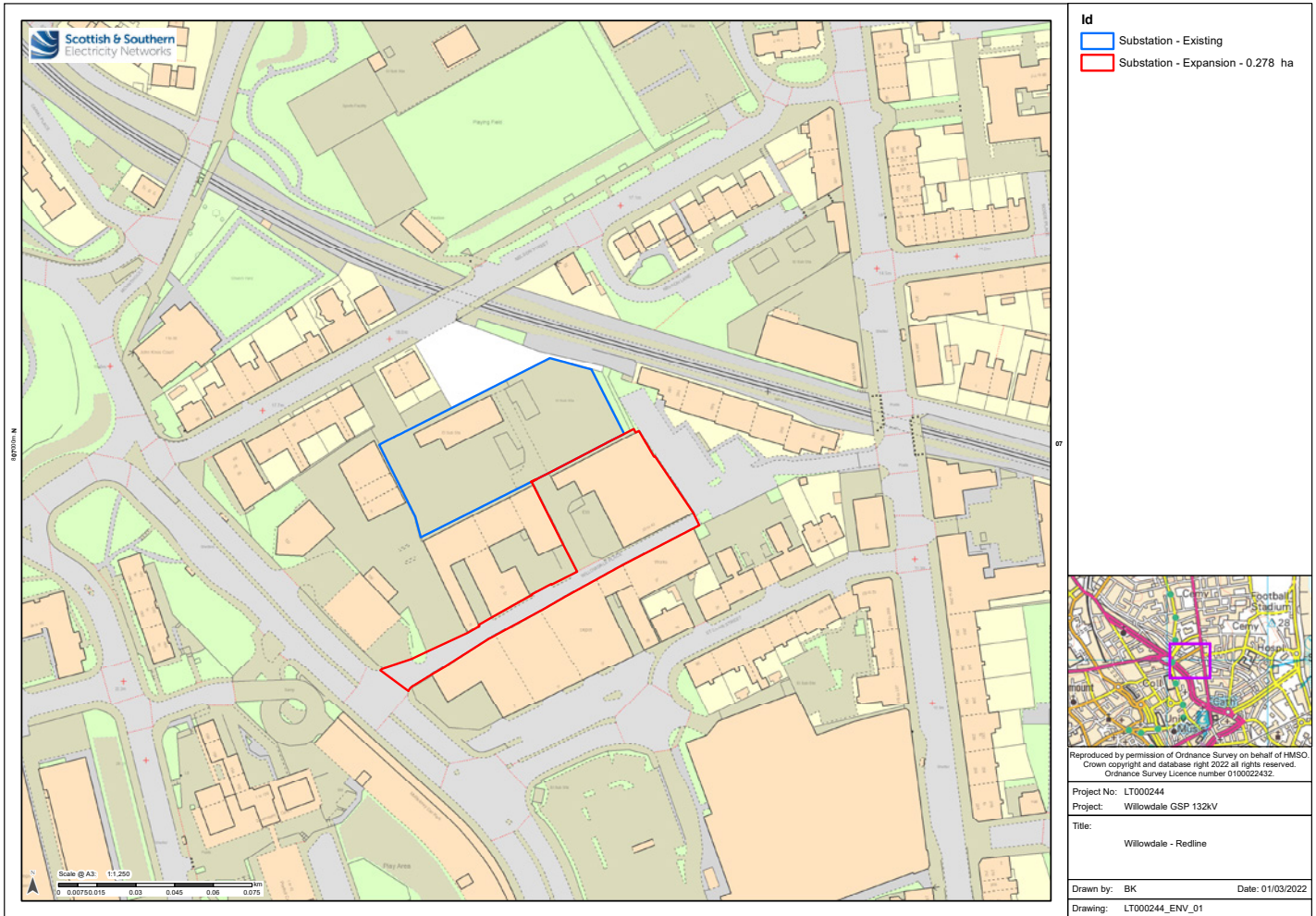
The works will comprise:

- Replacement of the two grid transformers with more efficient modern equivalents of a similar rating, housed indoors.
- Replacement of the open busbar arrangement with a modern indoor 132,000V (132kV) switchboard.
- Upgrades to the control systems and standby systems, to provide a more reliable service.
- Removal of the old outdoor equipment.
- Upgrades to the site security arrangements, and access road.

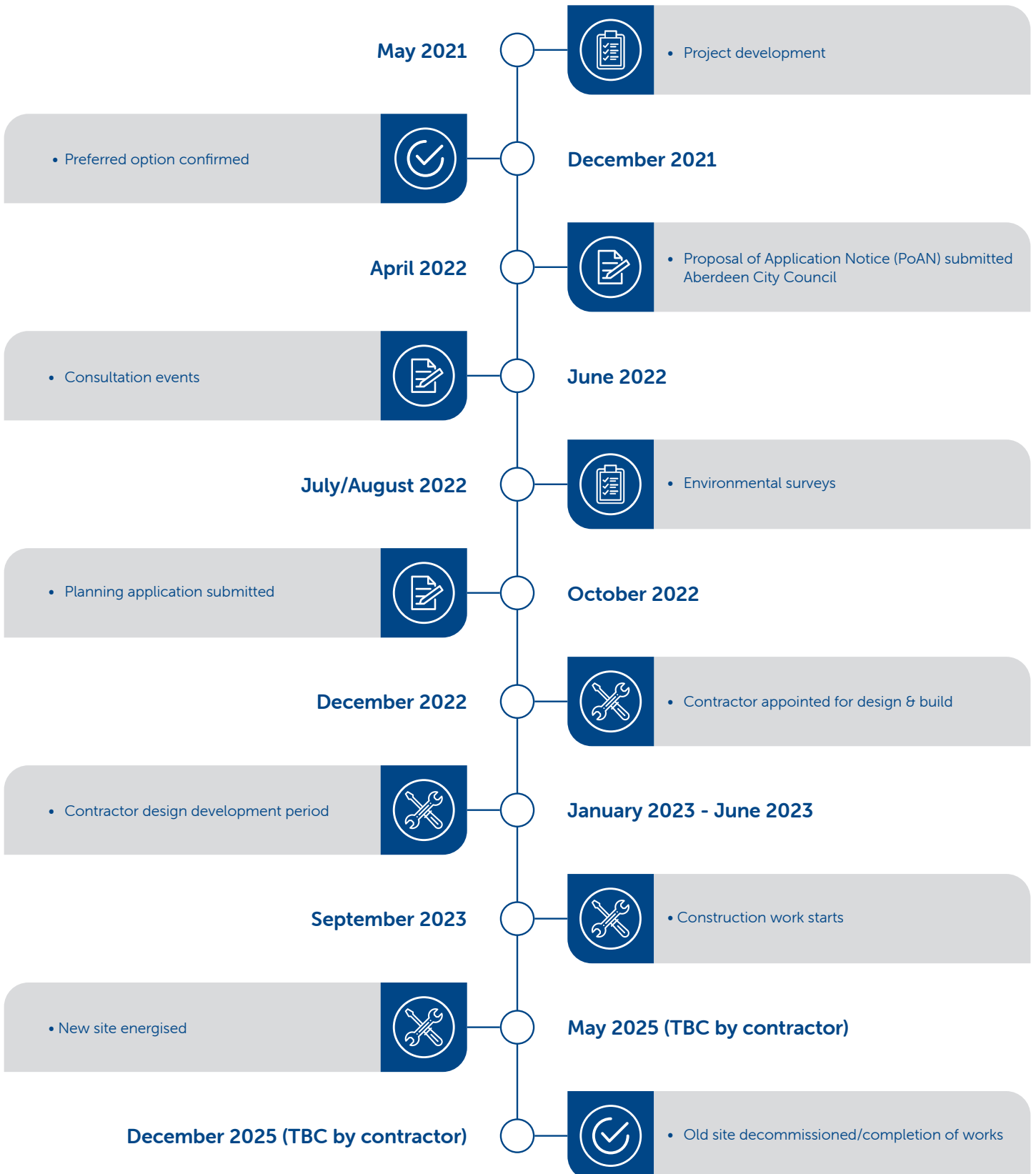


Planning application

This public event forms part of the pre-application consultation and feedback received will help inform the scope of assessments and ultimately the forthcoming planning application. We are aiming to submit the planning application to Aberdeen City Council in August 2022 allowing for 12 weeks of pre-application consultation. Any comments received during this consultation period will be assessed and comments provided in the Pre-Application Consultation (PAC) report which will support the planning application. We would encourage comments are submitted to us by 28th of July 2022.



Project timeline



Site development

A number of options for upgrading the substation were considered, including relocation to an alternative site, however the requirement to extend all six of the 132kV cables that feed the site and resulting alterations to the SSEN Distribution 33kV network make relocation extremely challenging.

The option of installing the new plant within the existing site boundary was also carefully considered. This is very challenging, because of the need to keep certain parts of the existing site live to maintain supplies to our customers whilst the works are ongoing. This results in a much longer sequence of activities, which means the construction period would be significantly longer.

The preferred option is to build the new facility alongside the existing site, to allow us to work safely and maintain supplies to customers whilst the works are underway. When constructed, all of the circuits will be transferred over onto the new site, the existing electrical plant will be removed, and the existing site left tidy.



The existing site off Willowdale Place comprises six 132,000V (132kV) cable circuits which meet on air insulated switchgear, which is exposed to the coastal elements, and is approaching the end of its design life. The switchgear allows power to be routed around Aberdeen City Centre, and isn't configured in the same way a modern substation would be.

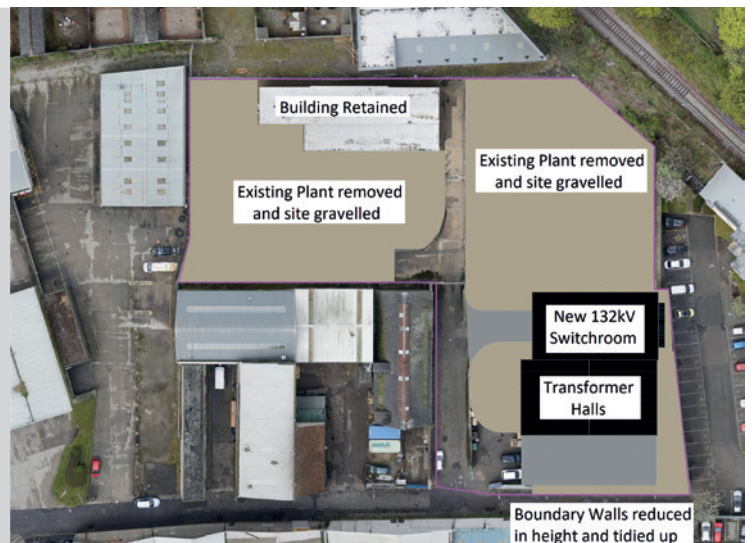
The transformers were installed in 1967 and have performed well, however spare parts are becoming difficult to obtain and the risk of faults is increasing with age.

The switchgear will be replaced with modern indoor gas insulated switchgear, which can be remotely operated from our control room, providing a more reliable service. The transformers will be replaced with like for like units, which will have enough capacity for the foreseeable future.

Our proposal is to purchase and demolish the existing foundry buildings, and to construct a new 132kV switchroom along the boundary with the existing site, which will be a 2-storey building with adjoining full height transformer halls to the south.

It is not proposed to remove the existing boundary walls, but instead to reduce them to a safe height whilst maintaining adequate screening and leaving a tidier appearance.

The existing electrical plant will be removed from the existing site and the building will be retained as it houses SSEN Distribution switchgear, which will not form part of this project.



Site development

To protect our assets, in coastal locations SSEN Transmission build as much as we can indoors. The buildings are relatively large to allow safe operation and maintenance of the electrical plant inside and will look like typical industrial units.

Pictures from similar projects are provided to show the scale and typical appearance, though design and colour of the buildings will be agreed with the planning authority. The proposed building floor area will be around 700 meters square and will be no more than 15 meters in height.



Typical 132kV Transformer hall



Inside a typical transformer hall

Key considerations

Transport, infrastructure and construction methods

Construction will require plant and machinery, along with vehicles to transport materials and workers to the site. We anticipate that normal construction traffic will utilise the existing road infrastructure. However, we are undertaking investigations to confirm if improvements are required.

A construction traffic management plan shall be produced to outline and manage vehicle movements associated with the development. The largest plant item to be delivered to the substation will be the two new 60MVA transformers.



Transformer being delivered

Laydown and office

Temporary offices, welfare and storage facilities for the main work force will be established during the planned construction period. Where possible, these will be within the site boundary, but there may be a requirement to locate these in close proximity to the site.



Typical welfare arrangement will be designed to fit into the available space, and may include stacked cabins, similar to the above picture.

Environmental considerations

Protected species: Protected species surveys are required for bats within the Foundry building. Should bats be found, we shall ensure that all necessary mitigation is put in place.

Noise: As part of the planning application, a review of potentially noise sensitive receptors will be undertaken including consideration of existing noise levels from the plant within the existing substation.

Landscape and visual: A landscape and visual amenity appraisal will be undertaken of the site and surroundings to identify key considerations for the proposed development, most notably any impact from the residents of the flats to the immediate east of the site. These will be fed into the Environmental Appraisal which will accompany the planning application.

Notes

A large, empty light blue rectangular area intended for notes.

What happens now, how do I have my say?

We understand and recognise the value of the feedback provided by members of the public during all engagements and consultations. Without this valuable feedback, the project development team would be unable to progress projects and reach a balanced proposal.

We are keen to receive your views and comments in regards to the following questions:

- Has the requirement for the project been clearly explained?
- Have we explained the approach taken to select the proposed site adequately?
- Are there any additional factors, or environmental features, that you consider important and should be brought to the attention of the project team?
- Following review of the provided information, how would you describe your understanding of the Willowdale GSP project?
- Overall, how do you feel about the Willowdale GSP project?

Comments

Your views and comments can be provided to the project team by completing a feedback form or by writing to Dav Lynch, Community Liaison Manager.

We will be seeking feedback from members of the public and stakeholders until 28th of July 2022.

All received feedback will be assessed and the proposed options adapted where necessary.



To support everyone online, we provide accessibility and language options on our website through 'Recite Me'.

The accessibility and language support options provided by 'Recite Me' include text-to-speech functionality, fully customisable styling features, reading aids, and a translation tool with over 100 languages, including 35 text-to-speech.

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

Feedback can be submitted online via the project website or via the project Community Liaison Manager:

Dav Lynch
Community Liaison Manager



dav.s.lynych@sse.com



M: +44(0)7918 404443



200 Dunkeld Road, Perth,
PH1 3AQ



Additional Information

Information will also be made available via the project web page and social media channels:

Project Website:

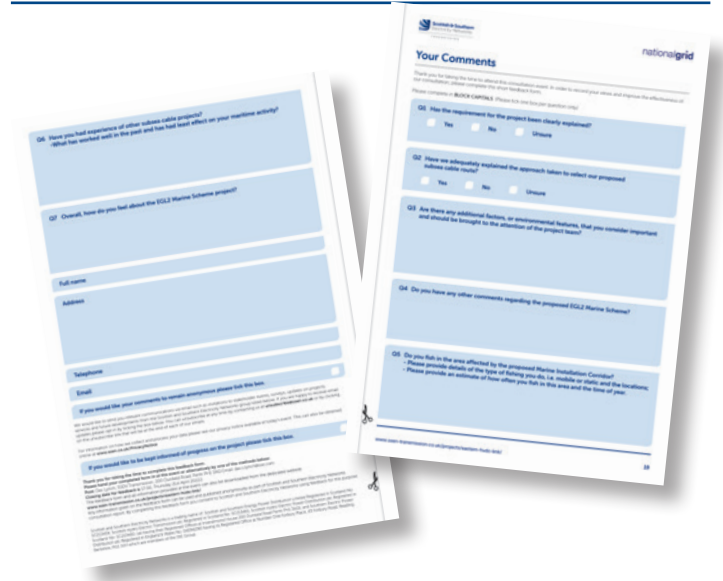
www.ssen-transmission.co.uk/projects/willowdale-gsp

Find us on Facebook:

SSEN Community

Follow us on Twitter:

@asstransmission



Your comments

Thank you for taking the time to attend this consultation event. In order to record your views and improve the effectiveness of our consultation, please complete this short feedback form.

Please complete in **BLOCK CAPITALS**. (Please tick one box per question only)

Q1 Has the requirement for the project been clearly explained?

Yes No Unsure

Q2 Have we explained the approach taken to select the proposed site adequately?

Yes No Unsure

Q3 Are there any additional factors, or environmental features, that you consider important and should be brought to the attention of the project team?

Q4 Following review of the provided information, how would you describe your understanding of the Willowdale GSP project?

I am very well informed I know a lot I know a little I know very little I know nothing at all

Q5 Overall, how do you feel about the Willowdale GSP project?

Support Neither support or object Object



Please use the space below to provide further comments:

Full name

Address

Telephone

Email

If you would like your comments to remain anonymous please tick this box.

Website address: www.ssen-transmission.co.uk/projects/willowdale-gsp

We would like to send you relevant communications via email such as invitations to stakeholder events, surveys, updates on projects, services and future developments from the Scottish and Southern Electricity Networks group listed below. If you are happy to receive email updates please opt in by ticking the box below. You can unsubscribe at any time by contacting us at unsubscribe@ssen.co.uk or by clicking on the unsubscribe link that will be at the end of each of our emails.

For information on how we collect and process your data please see our privacy notice available at today's event. This can also be obtained online at www.ssen.co.uk/PrivacyNotice

If you would like to be kept informed of progress on the project please tick this box.

Thank you for taking the time to complete this feedback form.

Please hand your completed form in at the event or alternatively by one of the methods below:

Post: Dav Lynch, SSEN Transmission, 200 Dunkeld Road, Perth PH1 3AQ Email: dav.s.lynch@sse.com

Closing date for feedback is 28th of July 2022.

The feedback form and all information provided at the event can also be downloaded from the dedicated website:

www.ssen-transmission.co.uk/projects/willowdale-gsp

Any information given on the feedback form can be used and published anonymously as part of Scottish and Southern Electricity Networks consultation report. By completing this feedback form you consent to Scottish and Southern Electricity Networks using feedback for this purpose.

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