



Visual Impact of Scottish Transmission Assets (VISTA)

Annual Review 2016/17

Foreword

I am delighted to introduce the 2016/17 Visual Impact of Scottish Transmission Assets (VISTA) review, which provides an update on our proposals to reduce the visual impact of our existing transmission assets in National Parks and National Scenic Areas within our network region.

The electricity transmission network in the north of Scotland is home to some of the UK's most impressive natural landscapes. From the Loch Lomond National Park, located on the boundary of our network and SP Energy Networks transmission network; to the Cairngorms National Park in the heart of the Scottish Highlands; there is no shortage of natural beauty and breath-taking scenery.

With much of our network dating back to the 1950's when power was first delivered to the Highlands and Islands; consideration of the visual impact of this infrastructure was less pronounced, in part due to the planning rules in operation at the time.

Also, the life-changing impact of bringing power to communities in the north of Scotland meant the benefits of delivering electricity, in many cases for the first time, largely outweighed concerns about the visual impact on its surroundings.

Whilst we now have more rigorous processes and consenting regimes for new infrastructure projects, VISTA offers a unique opportunity to look again at our existing assets and mitigate its impact in some of Scotland's most precious landscapes.

Over the last 12 months we have worked closely with a wide range of stakeholders to identify potential schemes to take forward to the energy regulator Ofgem for funding. As we further develop our proposals, stakeholder engagement will remain the central pillar of our approach to VISTA.

Our work so far has identified ten individual proposals to take forward for further investigation, consisting of four engineering schemes, two in the Loch Lomond National Park and two in the Cairngorms National Park; with a further six landscaping proposals across a number of locations.

We will be working hard to secure regulatory funding to deliver these schemes and we look forward to continuing to work positively with our stakeholders to leave a lasting legacy by improving the impact of our existing infrastructure on Scotland's landscapes.

David Gardner

Director of Transmission



Introduction

The VISTA project offers an alternative approach to project development – combining the technical skills of our engineers and colleagues with that of external stakeholders who have extensive knowledge of the Scottish landscape. This collaboration has been central to the development of our plans to date and will be pivotal as we further develop our proposals.

VISTA experienced a lot of momentum throughout 2016/17, both in terms of continued development of good working relationships with stakeholders to help shape visual impact mitigation proposals, and within our transmission business, where technical engineering experts have helped support and inform the feasibility of our initial proposals.

The project has successfully made use of stakeholder forums, helping to identify key issues in qualifying National Parks and National Scenic Areas (NSAs), where overhead lines and substations can be found within the landscape. These forums included a wide range of stakeholders, representing both statutory and non-statutory organisations, who have experience and interests in the landscapes under consideration. At each forum, attendees were encouraged to comment on a number of transmission assets identified as having a material visual impact, supported by external landscape architects (LUC), who undertook a Landscape and Visual

Impact Assessment (LVIA) to inform discussions.

This work took part in three stages; the first helped to define high priority areas where the transmission infrastructure was seen to have the greatest impact; secondly, through prioritising a preferred mitigation option, ranging from screen planting of trees to removing overhead lines and placing them underground; and finally, the third stage was for our in-house engineering and environment teams to assess the technical feasibility of delivering and maintaining mitigation solutions.

In all of the areas where stakeholders felt there was scope for mitigation options to be successful, we worked with them to help develop proposals to be put forward for technical analysis. The combination of locally informed stakeholders, an experienced project team and qualified landscape architects, allowed for meetings to become a platform for developing a proposal shortlist that underwent technical

analysis to review the feasibility for development.

Looking ahead we intend to develop those proposals that have met the VISTA criteria outlined in our policy, namely, presenting a real opportunity for visual impact mitigation to be delivered without causing significant technical challenges to the network or detrimental impacts to the environment.

The next step will be to engage more locally with landowners and communities as individual visual impact mitigation projects are established and progressed for detailed development. Funding applications will then be submitted to the energy regulator Ofgem for consideration.



Euan Smith
Transmission Development



What is VISTA?

The journey so far...

The electricity and gas markets regulator, Ofgem, is responsible for administering a £500m fund for GB electricity transmission owners to mitigate the impact of existing electricity infrastructure on the visual amenity of nationally designated landscapes. This is part of the RIIO-T1 Price Controls that incentivises and regulates how transmission owners operate, covering the eight year period from April 2013 up to March 2021.

The primary objective of VISTA is to use the Ofgem funding to deliver the maximum benefit for nationally designated landscapes in the north of Scotland transmission network. This will be achieved by delivering projects that offer significant reductions in visual impact, while avoiding unwanted economic and environmental impacts.

Above all, stakeholder collaboration is viewed as key to the success for implementing our VISTA policy. Scottish and Southern Electricity Networks (SSEN), operating as Scottish Hydro Electric Transmission Plc under licence, has worked with a broad and diverse range of external stakeholders to identify particular locations and types of mitigation to be considered for inclusion within SSEN's VISTA proposals.

Through this approach, SSEN has aimed to be fair and transparent in its decision making, documenting why particular proposals were progressed and setting out why others were not.

The purpose of this report is to provide an overview of VISTA and the key activities that have taken place in 2016/17.

Firstly, this will cover the early work with stakeholders to identify and prioritise designated landscapes where electricity transmission infrastructure has a visual impact.

Secondly, it will explain the use of stakeholder forums as a platform for working with interested parties to develop preferred mitigation solutions to identified visual impact in the landscapes these stakeholder have knowledge on.

Finally, it will set out the technical review process that was used to move from a shortlist of proposals informed through this stakeholder engagement, to selecting the projects that SSEN expects to undertake as formal VISTA applications to Ofgem.

Enhancing designated landscapes

VISTA represents an opportunity to reassess the historic electricity infrastructure within, and in some instances in close proximity to, National Parks and National Scenic Areas (NSAs), and to conserve and enhance the natural beauty, wildlife and cultural heritage of these important Scottish landscapes.

By promoting this project SSEN hopes to ensure that the proposals taken forward not only represent SSEN and its stakeholders vision as to where the natural beauty of the landscape can be enhanced, but also give those that live, visit and work in and around the designated landscapes a voice in contributing to the assessment and selection of candidate projects that may be taken forward. SSEN will ensure that the proposals developed are technically feasible and achieve best value for money by targeting the areas with greatest potential for effective mitigation.



Transmission towers in the Loch Lomond and the Trossachs National Park

How the allowance can be used

The fund can be used for measures which remove or reduce the impacts of existing infrastructure, or which may divert people's attention from impacts. Such as:

- Re-routing of existing overhead lines;
- Replacement of steel lattice towers with wood poles;
- Undergrounding existing overhead lines;
- Innovative mitigation techniques to reduce visibility of towers;
- General landscape enhancements which mitigate the impact of transmission infrastructure, and which may also support management plans or other ongoing initiatives;
- Recreational or social initiatives associated with the use of recognised designated areas, and which can be linked to improvement in visual amenity; and
- Other mitigation measures identified during consultations with stakeholders, including reducing the impact of existing transmission infrastructure in areas of high amenity in close proximity to designated areas.

The fund cannot be used for:

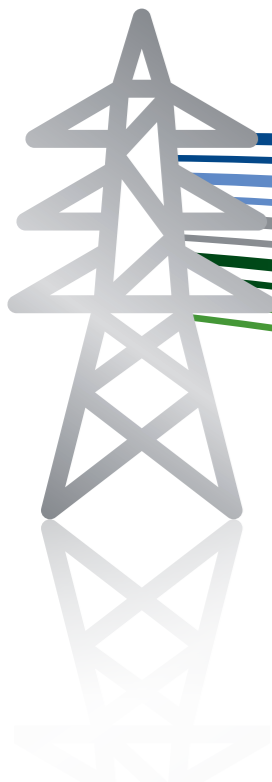
- The construction of new transmission infrastructure;
- Mitigation of impacts of SSEN infrastructure outside the immediate settings of National Parks or NSAs;
- Mitigation of impacts on other landscape, cultural heritage and natural heritage designations;
- Reducing visual impact of distribution (i.e. low voltage) infrastructure; and
- Funding existing landscape enhancement initiatives that are viewed as business as usual.

VISTA guiding principles

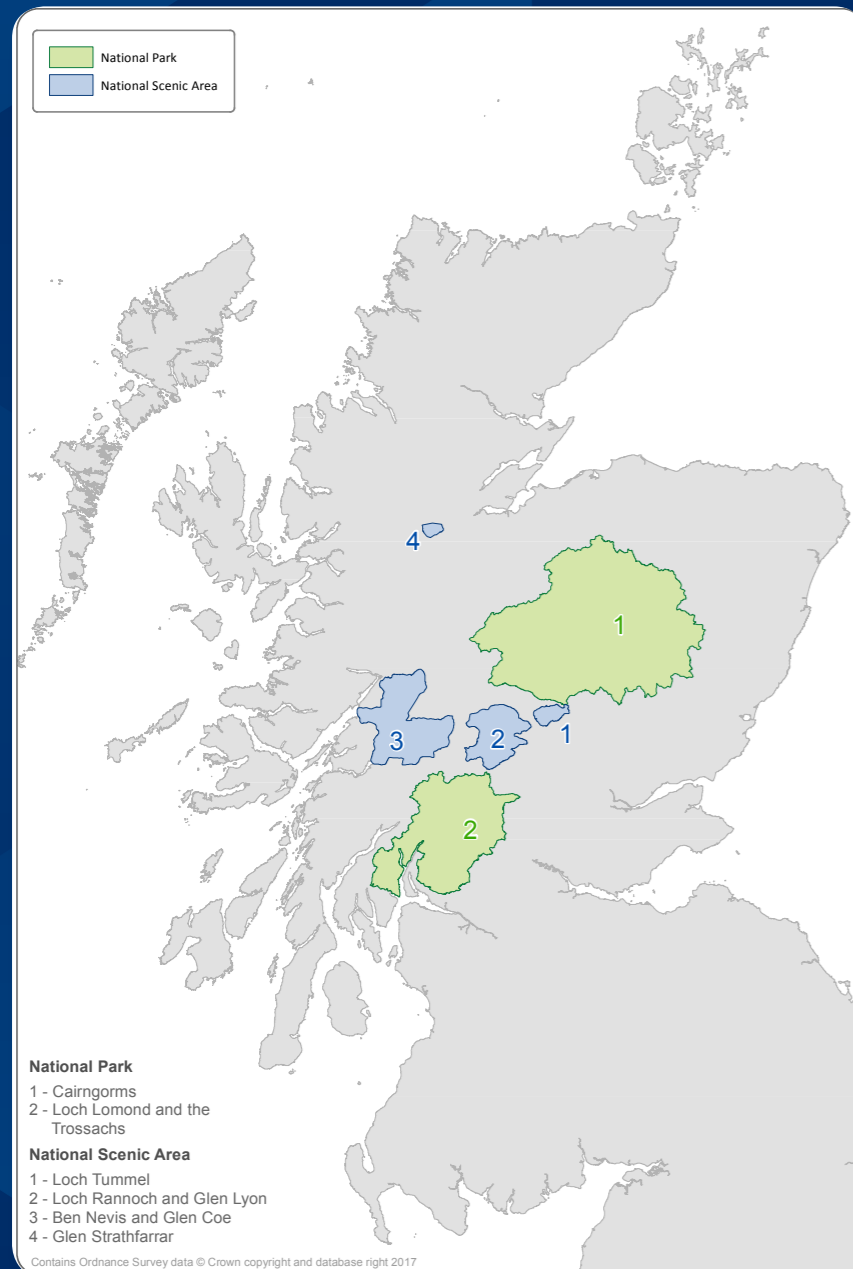
Beyond delivering a positive change to the existing visual impact transmission infrastructure has on the landscape, there were also guiding principles developed to deliver benefit and protect equally important interests that could be impacted by mitigation projects.

SSEN aimed to carefully consider potential projects/proposals referring to key selection criteria which will:

- Deliver the most beneficial enhancements for Scotland's precious landscapes while keeping undesirable environmental impacts associated with particular mitigation measures to a minimum;
- Enable users of National Parks and NSAs to benefit from their recreational, educational and social offering;
- Protect the technical viability of the wider transmission network;
- Be economical and efficient; and
- Involve a wide range of stakeholders.



Our prioritised sites



- Six designated landscapes were prioritised for proposal development in accordance with principles set out in the VISTA policy – two National Parks and four National Scenic Areas;
- The length of overhead lines identified within prioritised proposal areas amounted to over 345km;
- 12 sections of line identified through the initial stakeholder engagement process were selected for internal assessment by SSEN;
- 10 proposals have been prioritised for further development on conclusion of the internal assessment.

Working with stakeholders

Right from the beginning of the VISTA project, stakeholder involvement in helping to shape the development of proposals was viewed as a vital part of the process. To allow maximum benefit to be realised, the views of stakeholders and consumers needs to be at the heart of the decision making process.



Stakeholder forums

To ensure that our decisions were reflective of stakeholders' views, SSEN sought to involve as many relevant parties as possible. Through engagement with stakeholders and other relevant interest groups, SSEN aimed to provide an opportunity for these stakeholders to contribute to the identification and selection of VISTA proposals.

Engagement has been facilitated through the VISTA website, social media, stakeholder forums, and written consultation. In particular the stakeholder forums made use of qualitative methods, such as group

discussions, where minutes were taken to inform the development of proposals through the consultation process.

Each forum represented a specific geographic area covering an associated National park or NSAs. The first stakeholder forums were held in winter 2015 where the main focus was to introduce stakeholders to VISTA, with subsequent forums held in February and June 2016. Due to the geographic spread of our network, SSEN held forums in Glasgow, Balloch, Inverness, Grantown on Spey, Pitlochry and Fort William.

SSEN also has assets in the Loch Lomond and the Trossachs National Park (LLTNP), where SP Energy Networks (SPEN), the owner of the transmission network within central and southern Scotland, had already established a stakeholder partnership group. Here, the benefit and importance of a collaborative approach was recognised and the same stakeholder group was engaged in discussions on SSEN's infrastructure and consulted with at joint events held by both SPEN and SSEN, highlighting positive collaboration of Scotland's two Transmission owners.

Stakeholder forums and participating members

Stakeholder forum	Organisation
Loch Lomond and the Trossachs National Park Authority	<ul style="list-style-type: none">- Loch Lomond and the Trossachs National Park- Scottish Natural Heritage- Friends of Loch Lomond and the Trossachs- John Muir Trust- Luss Estates- LLTNP Community Partnership- Scottish Water- Forestry Commission Scotland- Scottish Government- Historic Scotland
Cairngorms National Park and Glen	<ul style="list-style-type: none">- Cairngorms National Park Authority- RSPB- Scottish Natural Heritage
Strathfarrar National Scenic Area	<ul style="list-style-type: none">- Highland Council- Atholl Estates
Kinloch Rannoch and Loch Tummel National Scenic Areas	<ul style="list-style-type: none">- John Muir Trust- Keep Rannoch Wild- Scottish Natural Heritage- Forest Enterprise Scotland
Ben Nevis and Glencoe National Scenic Area	<ul style="list-style-type: none">- The Nevis Partnership- Ben Nevis and Glencoe National Scenic Area Group- Scottish Natural Heritage- Fort William Community Council- Lochaber Geopark

How Stakeholders Prioritised Visual Impact Mitigation Schemes

Following the initial round of forums, stakeholders were invited to identify preferred sections of transmission infrastructure that should be prioritised for mitigation.

Once particular sections were prioritised, stakeholders were asked to comment on the effectiveness of different types of mitigation to alleviate the existing visual impact of that infrastructure. This work included:

- Developing alternative mitigation options for each of the areas to reduce the existing visual impact;
- Presenting the anticipated level of visual impact reduction and informing stakeholders of both the associated positive and negative impacts;
- Asking stakeholders to provide on the day feedback on mitigation solutions; and
- Allowing a period of four weeks after the forum for stakeholders to provide further comment of their preferred mitigation solution for shortlisted sections.

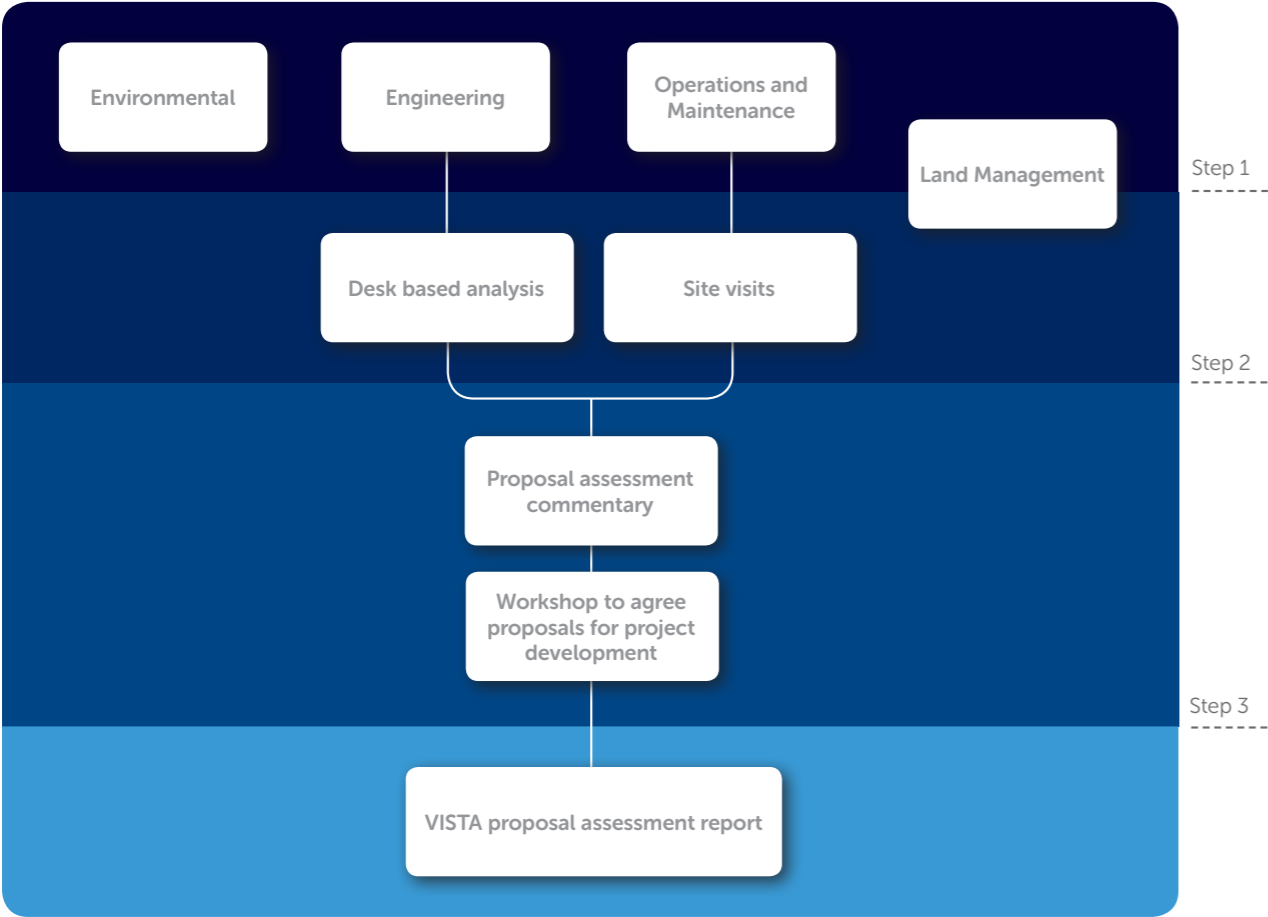


VISTA shortlist assessment process

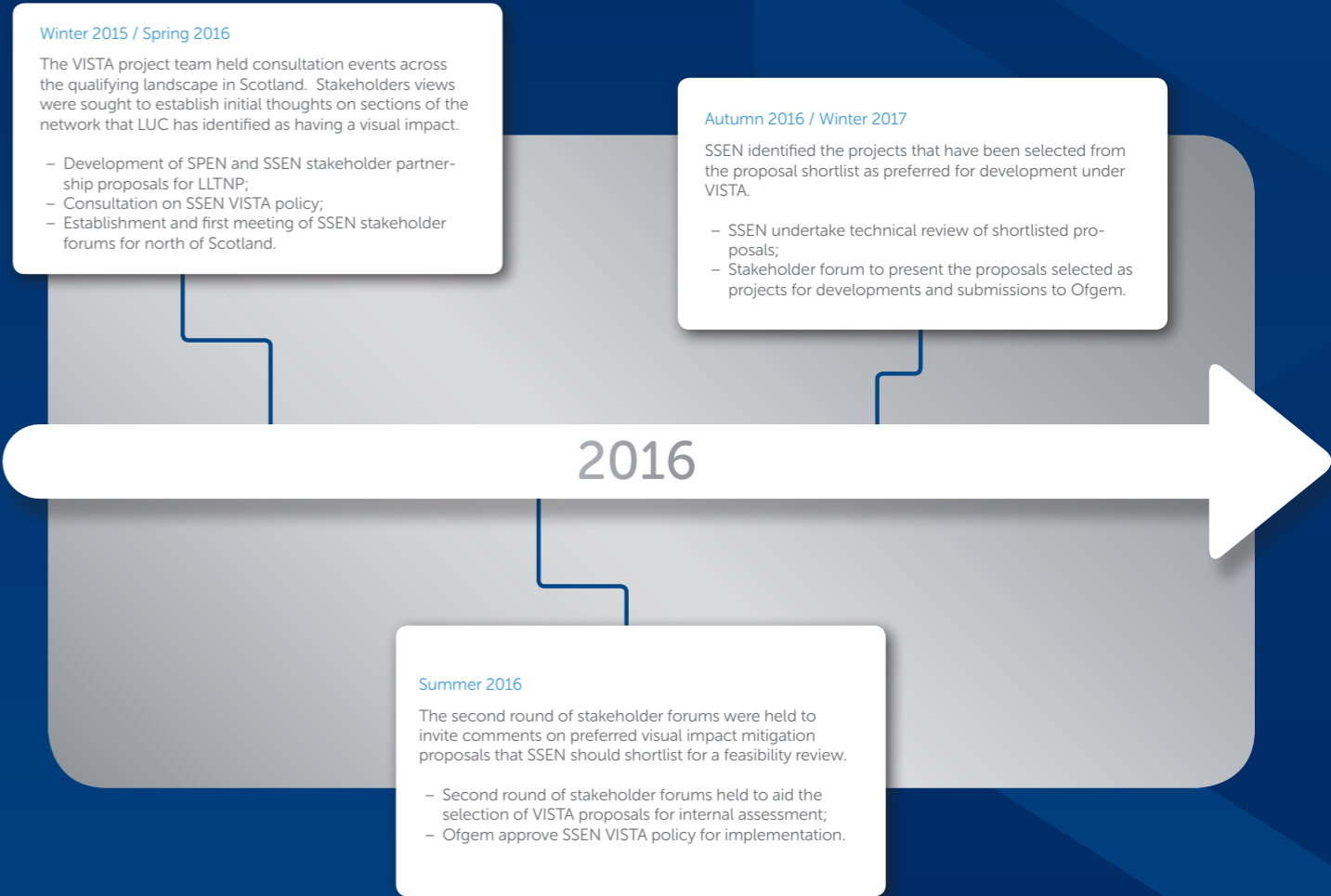
The final step in this process was for SSEN to undertake an internal feasibility review of the prioritised mitigation solutions developed through the consultation process.

This work involved input from various teams; engineering, project development, environmental, operations and maintenance, and land management. The teams were asked to feed into a technical and environmental assessment, using desk based analysis and site work to evaluate the potential for the mitigation solution to be delivered.

The process in undertaking this work took part in three steps and is outlined below. The primary aim of this work was to allow those proposals that met the principles outlined in the VISTA policy to be considered for development as a formal application to the Ofgem fund.



Timeline of key activities over the last year



Current proposals

Informed by the stakeholder engagement and consultation conducted to date, a number of proposals have been considered by SSEN’s engineering and environment teams.

Detailed technical analysis of the proposed schemes has concluded and the following proposals have been identified as offering the best opportunity for delivering visual impact enhancement, while meeting with the other core principles of VISTA, namely to limit negative socio-economic and environmental impacts and offer best value for money.

These schemes have also been deemed technically suitable from a networks operation perspective, ensuring that network reliability and security of supply will not be constrained if the schemes are successful in obtaining regulatory funding from Ofgem.



Glen Falloch

Remove overhead line infrastructure from the Glen Falloch area, by installing underground cables in place of the current 132kV overhead line. The project will initially examine a study area between Inverarnan substation and Crianlarich. The project will require the identification of a cable route, and sites for sealing-ends where the line will pass from overhead to underground.



Boat of Garten

Remove overhead line infrastructure north of Boat of Garten by installing underground cables in place of the current 132kV overhead line. The exact length of underground cable will be approximately 4km between Docharn and the substation east of Boat of Garten. The project will require the identification of a cable route and sites for sealing-ends where the line will pass from overhead to underground, in the vicinity of Docharn.



Nethy Bridge

Remove overhead line infrastructure to the north of Nethybridge by installing underground cables in place of the current 132kV overhead line. The exact length of underground cable is likely to extend approximately 7km between the substation east of Boat of Garten to the edge of the forestry near Castle Roy, north-east of Nethybridge. The project will require the identification of a cable route and sites for sealing-ends to the east where the line will pass from overhead to underground.



Sloy

Reduce the quantity of steel tower overhead line infrastructure within Glen Sloy and the Inveruglas area by installing underground cables in place of some of the current 132kV overhead lines. This may involve a mixed mitigation solution of underground cables and installation of less visually intrusive wood pole overhead lines. The project will initially examine a study area between Loch Sloy Dam and Inveruglas Power Station focusing on the parallel overhead lines running broadly east-west between them. The project will require the identification of cable routes, and sites for sealing-ends where the line will pass from overhead to underground.”



Landscaping

Throughout the consultation there was noted to be significant potential in seeking to develop a number of landscaping proposals across the network area. Currently SSEN is working to develop more detailed proposals for six designated landscapes where visual amenity may be enhanced through landscaping measures.

This could include options of tree screening and pathway enhancement, to more novel techniques such tower painting, insulator replacement, or native woodland planting. Once there is more detail on the types of landscaping mitigation that may be deliverable in these areas, SSEN will re-engage with stakeholders, and landowners, to define the options in more detail, following which we hope to submit as formal applications to the fund. At present the designated landscapes being considered are:

- The Cairngorm national park
- The Loch Lomond and the Trossachs national park
- Glen Strathfarrar National Scenic Area
- Loch Rannoch National Scenic Area
- Loch Tummel National Scenic Area
- Ben Nevis and Glencoe National Scenic Area

Conclusion

The electricity transmission network in the north of Scotland continues to provide a key lifeline service to the communities, businesses and generators who rely on it for their every day electricity needs.

When it was first built back in the 1950's, the primary objective at the time was to power the Highlands and Islands. As this infrastructure has an inevitable visual impact on its surrounding environment, which was perhaps less of a focus at the time it was constructed. VISTA offers a unique opportunity to look again and identify ways in which we can improve and enhance the visual amenity of these areas.

In the year ahead, SSEN will engage extensively with key stakeholders, including landowners, as it further develops proposals in advance of submitting applications for funding to Ofgem. There will be numerous opportunities for public consultation; building on the success of the stakeholder led approach to date, putting external parties at the heart of decision making.

To find out more about VISTA or if you wish to get involved, please visit:

<https://www.ssen-transmission.co.uk/sustainability-and-environment/vista>



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