

Transmission licensees,
Generators, suppliers, and
consumer groups

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Date: 5 May2020

Colleague,

Consultation on our assessment of Scottish Hydro Electric Transmission's proposals for reducing visual amenity impacts in Loch Lomond and the Trossachs National Park

We are consulting on our assessment of two funding requests by Scottish Hydro Electric Transmission (SHE Transmission) to deliver a new Enhancing Pre-existing Infrastructure (EPI) output under the RII0-1 price control.

In January 2020, we received a request from SHE Transmission to approve Allowed Expenditure for two EPI Outputs, which was submitted pursuant to Special Condition 6G.12 of the SHE Transmission electricity transmission licence ('the Licence'). SHE Transmission has requested £23.4m¹ in total to replace overhead lines (OHL) near Glen Falloch (£13.0m) and near Loch Sloy (£10.4m), located within Loch Lomond and the Trossachs National Park.

SHE Transmission's submission proposes that the Glen Falloch project will replace 4.5km of 132kV double circuit overhead line with 4.5km of underground cable. SHE Transmission propose that the Sloy project will replace 3km of 132kV double circuit overhead line with 3.1km of underground cable. SHE Transmission propose that they will deliver both projects, located within Loch Lomond the the Trossachs National Park by February 2022².

Non-confidential summaries of SHE Transmission's submissions are published alongside this consultation letter.

Having reviewed SHE Transmission's submission, we've assessed:

- SHE Transmission's fulfilment of the key commitments of its Visual Impact of Scottish Transmission Assets (VISTA) policy³. This includes working with stakeholders to identify and prioritise the Glen Falloch and Sloy mitigation projects to deliver an EPI output; and,
- SHE Transmission's proposed total project costs of £23.4m.

¹ Unless otherwise stated, all values are in 2019/20 prices

² Due to the Covid-19 pandemic, the project delivery date has been delayed from November 2021 to February 2022. It should be noted that we will further review and update the delivery date, as appropriate, when we make our final determination on the funding allowances for the Glen Falloch and Sloy projects.

³ <https://www.ssen-transmission.co.uk/sustainability-and-environment/vista/>

Our initial view is that the project costs are economical, efficient, and justified based on evidence provided by SHE Transmission and our internal benchmarking exercises. We are not proposing any reduction to the proposed project costs. In this letter, we have set out the background and context of RIIO-1 EPI Outputs, an overview of SHE Transmission's submission, and an outline of our assessment of the projects. In the Appendix, we have set out further details of the projects and our assessment.

Consultation questions

We are seeking stakeholders' views on our assessment and our proposed funding allowances for SHE Transmission to deliver the Glen Falloch and Sloy mitigation projects in Loch Lomond and the Trossachs National Park.

- i) Based on the information in this consultation, do you agree with our assessment of SHE Transmission's approach in undertaking the Glen Falloch and Sloy mitigation projects? In particular, we are looking for feedback regarding our approach to assessing the following elements:
- implementation of the VISTA policy,
 - benefits of the projects,
 - technical scope,
 - procurement process and delivery strategy;
 - approach to risk management; and,
 - costs
- ii) Based on the information in this consultation, do you agree with our assessment and proposed funding allowances for the Glen Falloch and Sloy mitigation projects?
- iii) Do you have any other comments or information relevant to our assessment?

Please email your response to the following questions to Cissie Liu at Cissie.Liu@ofgem.gov.uk by 5 June 2020.

Background on RIIO-1 Enhancing Pre-existing Infrastructure (EPI) outputs

As part of the RIIO-1 price control⁴, we introduced a new scheme for electricity transmission owners (TOs) to reduce the visual impact of pre-existing infrastructure in nationally designated areas⁵. The scheme applies to infrastructure in the following designated areas: National Parks, Areas of Outstanding Natural Beauty and National Scenic Areas. The expenditure cap for all mitigation projects that come forward under the scheme during the RIIO-T1 price control is £500m (2009/10 prices) in total⁶. The deliverables from these mitigation projects are known as EPI outputs.

An electricity TO can propose new EPI projects, and request funding for these through its price control⁷. However, before a TO can request funding for new EPI projects, it must submit a Mitigating Pre-existing Infrastructure Policy to the Authority in relation to methods

⁴ For more information, please see our RIIO-T1 Final Proposals for SP Transmission Ltd and Scottish Hydro Electric Transmission Ltd and accompanying documents: <https://www.ofgem.gov.uk/publications-and-updates/riio-t1-final-proposals-sp-transmission-ltd-and-scottish-hydro-electric-transmission-ltd>

⁵ Pre-existing transmission infrastructure is defined as network equipment such as lines and towers that are part of the licensee's transmission network as of April 2013.

⁶ The level of the expenditure cap was informed by a survey of households on the amount they would be willing to pay to reduce the effects of pre-existing transmission infrastructure on the visual amenity of designated areas.

⁷ Special Condition 6G.10 of the Licence provides "During the Price Control Period, the licensee may submit a request to the Authority to determine on the Allowed Expenditure for the licensee to develop and deliver a EPI Output". SHE Transmission's special licence conditions can be found on <https://epr.ofgem.gov.uk/>

of working with stakeholders to select projects in its transmission areas⁸. We approved SHE Transmission's Visual Impact of Scottish Transmission Assets (VISTA) policy in 2016⁹.

When we receive a funding request for a specific mitigation project, Special Condition 6G.14 of the Licence provides that the Authority will determine:

- a) whether, in proposing a project, the TO can demonstrate that it has complied with its policy, in accordance with Part A of Special Condition 6G.14; and,
- b) whether the proposed costs for delivering the project are economical and efficient; and, if so,
- c) the adjustment that is to given effect through a modification made in accordance with the provisions of Part C to Special Condition 6G.14.

Overview of the Glen Falloch and Sloy mitigation projects located in Loch Lomond and the Trossachs National Park

The scope of the mitigation projects submitted encompasses the following within Loch Lomond and the Trossachs National Park boundary:

Glen Falloch¹⁰:

- replacing a 4.5km section of a 132kV double circuit overhead line (OHL), and 13 steel lattice towers, with 4.5km underground cable from Derrydaroch and Crianlarich; and,
- installing two air-insulated outdoor sealing ends by existing towers (steel lattice tower based) to connect the new section of underground cables to the existing overhead lines.

Sloy¹¹:

- replacing 3km (three sections approximately 1km each) of 132kV double circuit overhead line (OHL), and 12 steel lattice towers, with 3.1km of underground cable between Sloy Dam and Sloy Power Station;
- for the two sections heading east toward Sloy Power Station, installing four two-wood-pole based air-insulated sealing ends to connect the new section of underground cables to the existing overhead lines;
- for the section heading west toward Sloy Dam, installing one air-insulated sealing end (steel lattice tower based) near existing tower to connect the new section of underground cables to the existing overhead lines;
- using gas-insulated sealing ends, underground cables will terminate into the new terminations on the existing gas-insulated switchgear at Sloy Switching Station.

SHE Transmission plans to complete the project by February 2022.

A map of the undergrounding routes proposed by SHE Transmission can be found in [the Appendix](#).

⁸ Special Condition 6G.5 of the Licence provides "Before making a request to the Authority to specify EPI Outputs under the provisions of Part B of this condition the licensee must submit to the Authority a Mitigating Pre-existing Infrastructure Policy ("Policy)". SHE Transmission's special licence conditions can be found on <https://epr.ofgem.gov.uk/>

⁹ A copy of our decision letter is available on our website: <https://www.ofgem.gov.uk/publications-and-updates/consultation-our-assessment-she-transmission-s-proposed-visual-impact-scottish-transmission-assets-policy>

¹⁰ This section of works is known as Project LT185

¹¹ This section of works is known as Project LT186

Our assessment of the Glen Falloch and Sloy mitigation projects

Our Approach

In our assessment, we have reviewed SHE Transmission’s submission, as well as supplementary responses provided by SHE Transmission to clarify our queries. We’ve examined SHE Transmission’s submission to verify the project meets the criteria set out in Special Condition 6G.13¹² and SHE Transmission’s VISTA policy document. As part of this, we have looked at the following aspects of the Glen Falloch and Sloy projects:

- the VISTA policy project selection process;
- project benefits;
- technical scope;
- SHE Transmission’s procurement process for tendered elements of project and delivery programme;
- SHE Transmission’s approach to risk and project management; and,
- the efficiency of costs (development, tendered, non-tendered).

We reviewed the scope of works proposed to ensure it is efficient for the outputs the project intends to deliver.

Summary of our findings

Table 1 below summarises the key initial findings from our project assessment for both projects. It includes the assessment category, our rating (Red, Amber, Green – RAG), and a short summary of the underlying reasons for the rating.

Further details can be found in [the Appendix](#).

Table 1

Assessment category	RAG rating	Overview of findings
Implementation of VISTA policy		Good evidence provided of steps SHE Transmission has taken to implement commitments in its VISTA policy.
Benefits of projects		Positive visual, landscape, and economic benefits are expected for the public, tourism, landowners, and other parties as a result of the mitigation projects.
Technical scope		The technical scope is in line with the outputs the projects intend to deliver.
Procurement process and delivery strategy		SHE Transmission ran a competitive procurement process. Delivery strategy is sufficient and justified.
Approach to risk management		We consider that SHE Transmission are applying appropriate risk management and mitigation strategies. The activities in SHE Transmission’s risk register, and proposed risk allowance are in line with similar projects we’ve seen.
Costs		<u>Project development costs</u> Preliminary project development costs are in line with similar projects we’ve seen. We consider it appropriate to include the early development costs of two VISTA projects did not materialise.
		<u>Tendered costs</u>

¹² SHE Transmission’s special licence conditions can be found on <https://epr.ofgem.gov.uk/>

		We consider the tendered costs to be efficient.
		<u>Non-tendered costs</u>
		We consider the non-tendered costs to be justified.

It should be noted that we will further review and update the costs and impacts of changes in the initial indices for metal rates and currency exchange when we make our final determination on the funding allowances for the Glen Falloch and Sloy projects.

Next steps:

We intend to make a final determination on the two mitigation projects located in the Loch Lomond and the Trossachs National Park and allowed expenditure later in the year, after considering responses to this consultation. We listed our main consultation questions at the start of this letter.

Please send your responses to Cissie Liu at Cissie.Liu@ofgem.gov.uk by 6 June 2020.

We appreciate that stakeholders are focusing on responding to Covid-19 at the moment. The timeframe of this consultation deadline reflects a timely decision is made to guarantee contractor prices and prevent delays in the work programmes.

Unless marked confidential, we will publish all responses on our website (www.ofgem.gov.uk). If you wish your response to remain confidential, please clearly mark your response to that effect and give your reasons for seeking confidentiality.
Yours sincerely,

Min Zhu
Deputy Director, RIIO ET

Appendix

The Appendix provides further details on the project and our assessment.

Assessment of SHE Transmission's approach

Implementation of VISTA Policy

Overall, our initial view is that we are satisfied that, in proposing the Glen Falloch and Sloy projects, SHE Transmission have complied with the processes set out in its VISTA policy.

In 2016, we assessed and approved Scottish Hydro Electric Transmission's (SHE Transmission) VISTA policy¹³. Our assessment found that the VISTA policy met the requirements set out in Part A of Special Licence Condition 6G, specifically, paragraph 6G.6, and that its implementation will help ensure transparency about how SHE Transmission and its stakeholders select and prioritise mitigation projects during the price control.

Accordingly, a key aspect of assessing funding requests is ensuring that the proposed mitigation project is an appropriate application of the VISTA policy.

In its submission, SHE Transmission outlined the steps it took to implement the VISTA policy¹⁴ and how this has resulted in the two proposed Loch Lomond and the Trossachs National Park mitigation projects. As part of this, SHE Transmission summarised its methodology¹⁵ for selecting the project after evaluating five provisionally shortlisted projects, and explained how it worked with its stakeholders in regular forums to reflect their views on project identification, selection, and development.

Benefits of project

SHE Transmission has identified the following benefits within its submission:

- The section of OHL between Crianlarich and Derrydaroch, near Glen Falloch is visible from the A82 road, and the railway line. The steel lattice towers are highly prominent from the main road near Derrydaroch. The towers become more noticeable travelling north from the A82 carpark, as they become skyline features looking north along Glen Falloch towards Crianlarich.
- Undergrounding this section of OHL will enhance views for local communities and users of the West Highland railway, the West Highland Way walking route, and users of the main road A82 transport route. Removal of OHL may also benefit landowners by increasing the land available for farming.
- The sections of OHL between Sloy Dam and Sloy Power Station runs adjacent to the path serving Loch Sloy. The eastern extents of both lines are broadly parallel to Loch Lomond & Cowal Way and the Three Lochs Way, both of which are included in Scotland's Great Trails.
- Undergrounding these sections of OHL enhances the landscape and special qualities along the dam road, particularly for visitors of Scotland's Great Trails, and those walking up the dam road to access the hills and scenic views over Loch Lomond. Views up the glen and into the hills will also be enhanced for users travelling on the

¹³ You can read our decision here: <https://www.ofgem.gov.uk/publications-and-updates/consultation-our-assessment-she-transmission-s-proposed-visual-impact-scottish-transmission-assets-policy>

¹⁴ SHETL's VISTA Policy Annexe provides further detail on the ways in which the policy will be applied and decisions will be made under VISTA: https://www.ssen-transmission.co.uk/media/1577/vista-policy-annex_v21.pdf

¹⁵ The methodology was developed by consultants LUC to understand the landscape and visual impacts arising in relation to pre-existing transmission infrastructure being considered within the VISTA initiative.

West Highland Railway line. Views from Inveruglas, which is frequented by many tourists, will also be enhanced through removal of pylons from the skyline.

Our initial view from the information presented in SHE Transmission's submission set out above, is that the project will benefit consumers by mitigating adverse impacts of the existing transmission infrastructure on the highly valued landscape and visual amenities in these areas of Loch Lomond and the Trossachs National Park.

Technical scope

Our initial view is that the technical scope of the projects are efficient. The preferred undergrounding routes are appropriate and justified.

The proposed route for the underground cable near Glen Falloch roughly follows parallel to the existing overhead line (OHL)/existing tracking. The route also takes care to avoid Sites of Special Scientific Interest, heritage assets, and known areas of peat.

The proposed routes going east towards Sloy Power Station follow roughly follow the same route from the gas insulated switchgear (GIS) building, and will use existing entries into the GIS basement. The preferred route also avoids challenges associated with crossing a shallow box culvert. The proposed route going west towards the Loch Sloy Dam is the most suitable for development, as it is furthest away from very steep grounds.

Procurement process and delivery strategy

SHE Transmission provided a summary of tenderer submissions and information relating to the evaluation process when choosing the successful tenderer. SHE invited 13 contractors to undertake a pre-qualification questionnaire to ensure demonstrated experience with cable projects. Ultimately, four bids were submitted. Bids that received highest technical scores were then shortlisted to continue in the tendering process. SHE Transmission stated that the preferred contractor provided the most competitive price and timeframe for completion, and are the preferred contractors for these two projects.

Based on the information provided above, our initial view is that tender process for the Glen Falloch and Sloy works was open and attracted a number of competent bids.

We have reviewed the delivery strategy and think that it is sufficient and justified. The delivery strategy highlighted key milestones.

Due to the Covid-19 pandemic, the project delivery date has been delayed from November 2021 to February 2022. We will continue to engage with SHE Transmission who are monitoring the impacts of Covid-19 on its project delivery closely. It should be noted that we will further review and update the delivery date, as appropriate, when we make our final determination on the funding allowances for the Glen Falloch and Sloy projects.

Risks

Our initial view is that SHE Transmission provided an appropriate approach to identify and assess risks, as well as mitigation activities for risks associated with the project.

We reviewed SHE Transmission's risk register, including mitigation actions and strategies associated with all risk items. We used internal benchmarking where possible to compare requested risk allowance with other similar projects.

SHE Transmission have identified the following top five areas where they retain responsibility over risks in Table 2 below.

Table 2

Glen Falloch (LT185)	Sloy (LT186)
<ul style="list-style-type: none"> • Deer stalking interface • West Highland Way impact • HDD approval with Network Rail • Access blocked by land owner • Outages 	<ul style="list-style-type: none"> • Outages • Complications at circuit termination at Sloy Power Station • Telecoms outages • S37 Consents approval • Access blocked by land owner

SHE-T requested a risk allowance of £0.5m for the Glen Falloch project, and £0.4m for the Sloy project (as part of non-tendered costs). We think these values are justified and we are satisfied that SHE-T has put in place measures to mitigate risks.

Assessment of SHE Transmission’s proposed costs

Costs

We reviewed project costs in three general categories; preliminary project development costs, tendered costs, and non-tendered costs. We analysed costs for each project activity and cross-checked similar activities from other projects. Areas that were unclear were clarified with SHE Transmission through supplementary questions so we could understand whether cost efficiencies could be made, and cost differences between similar items to ensure no duplication of costs.

Table 3 below shows the cost breakdown across project categories.

Table 3

Glen Falloch (LT185)		Sloy (LT186)	
Project category	Cost (£m)	Project category	Cost (£m)
Preliminary project development costs	0.3	Preliminary project development costs	0.3
Tendered costs	10.9	Tendered costs	8.3
Non-tendered costs	1.8	Non-tendered costs	1.8
Total	13.0	Total	10.4

Preliminary project development costs

It’s our view that these costs are comparable to other similar projects.

We assessed the project’s preliminary project development costs in two sections - VISTA programme development and implementation costs, and the Glen Falloch and Sloy project development costs.

SHE Transmission are seeking to recover the costs it has incurred to date on the development and implementation of its VISTA programme¹⁶. This cost is included in their total requested project cost. Based on the supporting evidence provided, we consider that

¹⁶ According to Special Condition paragraph 6G.12, the licensee may request the Authority to approve Allowed Expenditure for an EPI Output by giving notice of its request to the Authority. As well, paragraph 6G.13(c) provides that the notice must contain “forecast costs for delivering an EPI Output, with an expenditure profile for all Relevant Years of delivery, and a breakdown of the total forecast costs including the costs of any additional preliminary work to determine the feasibility of an EPI Output”. The Authority will determine the total allowed efficient expenditure, including the development costs as stated in paragraph 6G.13(c), following an assessment of the TO’s proposed delivery costs.

the requested costs for the policy development and implementation of the VISTA programme to date (from 2013 to 2016) are efficient. SHE Transmission is seeking to recover the Glen Falloch and Sloy project development costs, including pre-construction works, such as preliminary works for developing design options, stakeholder engagement, environmental works, and associated costs for land acquisition and consents. SHE Transmission are also seeking to recover preliminary development costs for two projects, Arrochar and Loch Rannoch, which ultimately did not materialise due to SHE Transmission's prioritisation and selection process¹⁷.

Tendered Costs

It is our initial view that the tendering process undertaken by SHE Transmission was economical and efficient. SHE transmission explained that the majority of project costs are for the overhead line removal, main construction, and electrical installation of undergrounding cables. Based on information provided by SHE Transmission, we are satisfied that these items were competitively tendered. SHE Transmission has explained that the preferred contractors provided the most competitive price and timeframe for delivery.

Non-Tendered Costs

Our initial view is that non-tendered costs are within reasonable range.

We assessed these costs using historical data, and proposed costs are comparable to previous projects. It is our view that SHE Transmission have provided sufficient evidence on its non-tendered activity.

Non-tendered costs of the project are incurred through areas of work which don't form the main scope of the contracted works. These include:

- risks held by SHE Transmission (covered in [the risks section](#) above);
- project management and overhead costs; and,
- other programme related costs (eg consents).

¹⁷ Normally, the costs of preliminary development of the VISTA programme (ie EPI outputs) are shared and allocated across EPI output submissions. As the Arrochar and Loch Rannoch projects did not materialise as a result of SHE Transmission's selection process, we think it is appropriate to include their proportion of preliminary developments costs with this application. SHE Transmission's process is outlined in their VISTA Policy Annex: https://www.ssen-transmission.co.uk/media/1577/vista-policy-annex_v21.pdf

Maps of preferred undergrounding route

Figure 1: LT185 Glen Falloch

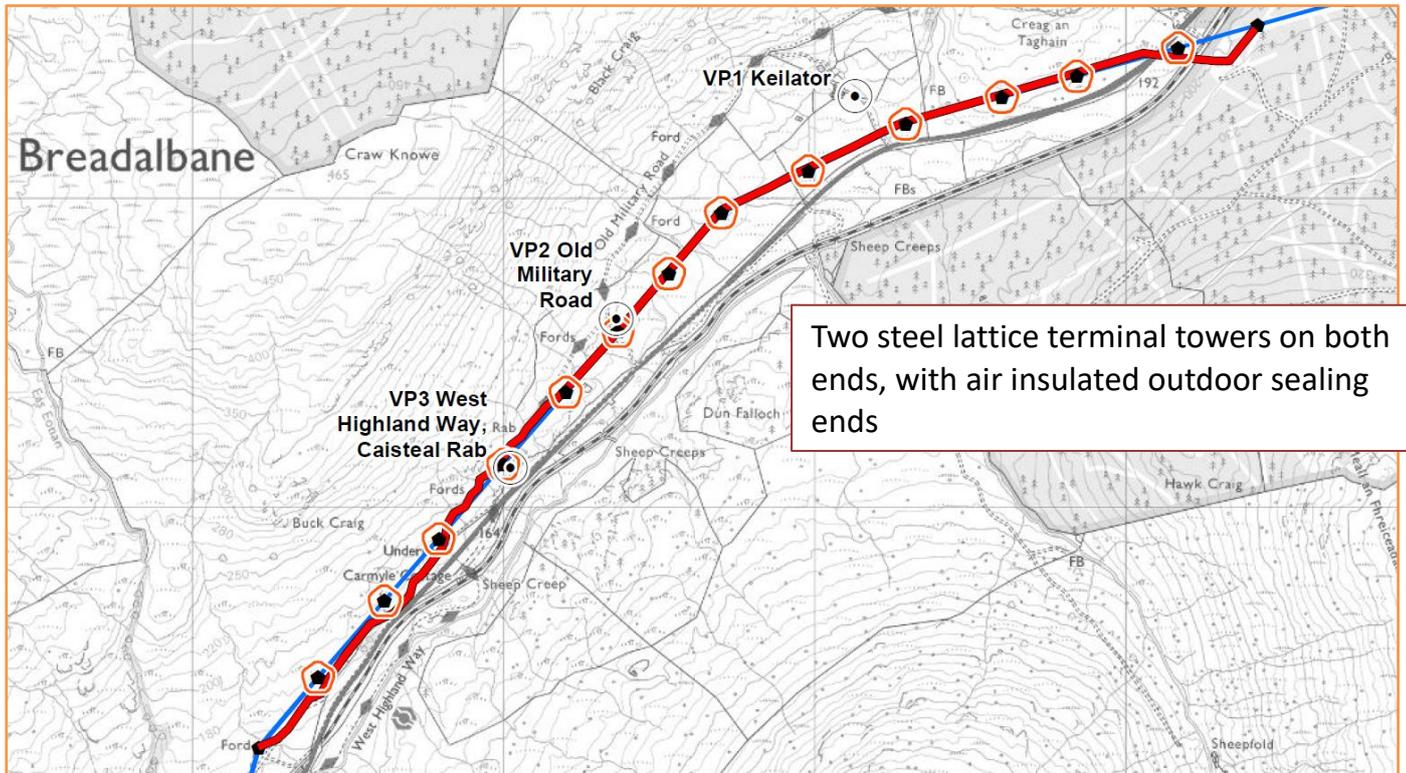


Figure 2: LT186 Sloy

