Appendix 4.3: Community Consultation Report

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1 INTRODUCTION

1.1 Overview

- 1.1.1 This report provides detail of engagement with the local community during the technical feasibility and Environmental Impact Assessment (EIA) process for The Proposed Development. The report includes copies of consultation material together with the responses and outcomes of the consultation process.
- 1.1.2 Consent for construction of The Proposed Development is being sought by way of an application to the Scottish Ministers under Section 36 of The Electricity Act 1989.
- 1.1.3 Whilst pre-application consultation reports are a mandatory requirement for 'Major' or 'National' projects, as set out in the Town & Country Planning (Development Management procedure) (Scotland) Regulations 2013, as the application for the Development is made under Section 36 of The Electricity Act 1989 and will be submitted to the Scottish Ministers, there is no such mandatory requirement. Nevertheless, the Applicant is committed to a comprehensive strategy of community engagement, and as such a wide range of public consultation has been undertaken prior to the submission of the application, in line with best practice.
- 1.1.4 This community consultation report sets out the means by which the community consultation was undertaken, and the responses from such consultation. This report is an appendix to Chapter 4: EIA Approach, Scoping and Consultation of this EIA Report, and should be read in conjunction with that Chapter.

2 COMMUNITY CONSULTATION

2.1 Community Councils

2.1.1 The Applicant has proactively engaged with local community councils to provide an overview of the project and general progress update. Dialogue has been maintained with relevant community councils through the EIA process, and the Applicant attended community council meetings with Spean Bridge, Roy Bridge and Achnacarry Community Council on 5th December 2017 and with Glen Garry Community Council on 5th February 2018.

2.2 Public Exhibitions

Scoping Stage

- 2.2.1 Following submission of the Scoping Report for the project in May 2017, a public exhibition was held in Glengarry Community Hall, Invergarry on 28th June 2017 from 3pm 7pm.
- 2.2.2 Two adverts were placed in the Oban Times newspaper, which incorporates the Lochaber Times, over two weeks leading up to the event. A copy of the advert is included in Appendix A1. In addition, letters were sent to approximately 600 local residents and direct invites were sent to local political representatives and community councils.
- 2.2.3 A series of A1 exhibition boards were on display at the event to provide an overview of the project and a leaflet was available providing contact details for attendees. Members of the project team were available to explain the project and to answer any queries from

members of the public as they arose. A copy of the leaflet is included in Appendix A2 and a copy of the boards (at A4 size) is included in Appendix A3.

2.2.4 Feedback forms were provided at the exhibition for attendees to complete, or alternatively attendees were directed to the feedback form on the project website:

http://sse.com/whatwedo/ourprojectsandassets/renewables/coireglas

2.2.5 Approximately 150 people attended the public exhibition at the scoping stage of the project.

Pre-Application Stage

- 2.2.6 A further public exhibition was arranged prior to submission of the application to provide an update to the project since scoping stage, advise of submission timescales and confirm how members of the local community should comment on the application once submitted.
- 2.2.7 This exhibition was due to be held at Glengarry Community Hall, Invergarry on 27th February 2018 from 3pm to 7pm and details of the event were advertised in the West Highland Free Press and the Oban Times newspapers. A copy of the advert is included in Appendix A4. In addition, letters were sent to approximately 600 local residents and direct invites were sent to local political representatives and community councils.
- 2.2.8 However, due to adverse weather conditions, the public exhibition was cancelled and rearranged for 13th March 2018 from 3pm to 7pm at Glengarry Community Hall, Invergarry. A further letter drop took place to the local community, as well as announcements on local radio stations, to inform of the revised date.
- 2.2.9 A series of A1 exhibition boards were on display at the event, providing an overview of the proposals and visualisations from representative viewpoints. A 3D fly through of the project was also available. Copies of the exhibition boards (at A4 size), are included in Appendix A5.
- 2.2.10 The exhibition boards and SSE staff and consultants made clear to attendees that comments received by SSE as part of the pre-application consultation exercise were not representations to the Section 36 application and that any representations could be made direct to Scottish Government once an application had been submitted.
- 2.2.11 Approximately 80 people attended the exhibition at the pre-application stage of the project.

Community Consultation Feedback

- 2.2.12 A summary of comments received during the consultation process are outlined below:
 - Some attendees sought further explanation as to how pumped storage hydro works. This was addressed through discussion with the project team, the information provided on exhibition boards, supported in the pre-application exhibition with visualisations and a 3D fly through.
 - It was noted at the scoping stage exhibition that the OS plans included in the application for The Consented Development did not now include all of the properties in

the area, particularly along Kilfinnan Road. This comment was taken on board and more detailed updated OS mapping was presented at the pre-application stage exhibition and will be included in the EIA Report.

- Respondents questioned what is proposed in terms of local road improvements and on the trunk roads. This was explained at the exhibitions and details are provided in the EIA Report.
- Comments were expressed regarding the consideration of alternative access arrangements for the project. This was discussed at the exhibition and the consideration of alternatives is provided in the EIA Report.
- Respondents queried how the scheme would impact recreational users and how access would be maintained for the Great Glen Way and users on the canals and loch. This was explained at the exhibitions and details are provided in the EIA Report.
- A comment was received on the likely projection of vehicle movements required for the project. Details are provided in the EIA Report.
- Respondents questioned what is proposed in terms of use for the excavated rock that will be produced. This was explained at the exhibitions and details are provided in the EIA Report.
- Respondents questioned what community benefit scheme will be proposed for the local communities.

2.3 Other Consultation

Local Resident Meetings

2.3.1 Throughout the EIA process, the Applicant has proactively engaged with local residents (some of whom are also local business owners) and attended meetings at some residents' houses to discuss the proposals and listen to any concerns.

Local Business Engagement

2.3.2 On the 14th September 2017, the Applicant provided an overview of the project to Lochaber Chamber of Commerce. A similar presentation was also made to Fort William Marina and Shoreline Company on the same day. Other discussions have been held with local business or interested parties such as Scottish Canals and Aggregate Industries.

3 Summary and Conclusion

3.1 Overview

3.1.1 The Applicant has proactively engaged with a wide range of local residents, businesses and the community council prior to the submission of a Section 36 application for The Proposed Development. Public exhibitions were held at both the scoping stage and also pre-application in order to inform the local community of the proposals and take on board any comments prior to submission. The public exhibition events were well advertised through the use of local posters, adverts in the local newspaper, and updates to the local Community Councils, Councillors and politicians. Comments received during the consultation process were considered throughout the EIA process.

APPENDIX 1: PUBLIC EXHIBITION ADVERT (JUNE 2017)



Public Exhibition

Coire Glas pumped storage proposal

SSE is proposing a revised planning submission for the Coire Glas pumped storage scheme at Loch Lochy.

We are holding a public exhibition in order to provide the local community the opportunity to meet members of the project team and discuss our proposals.

There will be a final exhibition in Autumn 2017 prior to submission of the planning application to Scottish Ministers for determination.

Copies of the exhibition boards will be available for download from the project website (www.sse.com/coireglas) from Thursday 29th June. For questions about the project, please contact, Corinna Scholes : Corporate Affairs, SSE, 1 Waterloo Street, Glasgow , G1 6AYT: +44 (0)7342 02742 Email:corinna.scholes@sse.com

Date: Wednesday 28th June Time: 3pm – 7pm

Location: Glengarry Community Hall Invergarry PH35 4HG

APPENDIX 2: PUBLIC EXHIBITION LEAFLET (JUNE 2017)

This Exhibition

Exhibitions such as this are a very important part of the development process for us. The purpose of this exhibition is to engage with the local community and interested parties about our proposals and the work we have undertaken so far. The exhibition is a chance for us to share our plans and is an opportunity for people to raise questions, concerns, ideas or comments that can be considered as part of the development process.

We will be holding another exhibition in November 2017 to share an update on the project with the local community and interested parties. Please visit the project micro site www.sse.com/coireglas for details.



Keeping in touch

SSE would welcome the submission of comments in respect of the proposal. If you have any comments or questions please contact Project Liaison Manager Corinna Scholes at:

Email : corinna.scholes@sse.com Tel: 07342 027420 Address: 1 Waterloo Street, Glasgow. G1 6AY

Our commitment

SSE's core purpose is to provide the energy people need in a reliable and sustainable way. This purpose brings clear responsibilities and is why sustainability is one of our core values.

Our sustainability value – Our actions and decisions are ethical, responsible and balanced, helping to achieve environmental, social and economic well-being – can be summed up in practice by the way we seek to make a positive difference to people's lives by being responsible in all that we do.

Managing our environmental impact is therefore a core part of our approach to sustainability and we will be taking a more detailed look at the activity taking place to manage our environmental impact across all of our businesses.

This includes the environmental challenges of developing, constructing and operating power stations and electricity networks, and helping both our domestic and business customers to become more efficient in their use of energy.



Coire Glas Pumped Storage Proposal

Public Exhibition





SSE and Hydro Energy

Hydro is in SSE's DNA. SSE played a proud role in Scotland's hydro revolution, which began in 1943 with the Hydro Electric Development Act. This delivered electricity across the Highlands and dramatically improved the lives of hundreds of thousands of Scots. Today SSE remains one of the UK's largest generator of renewable energy, in keeping with its historic aim to provide safe and reliable energy for all.

Hydro pumped storage, a technology which has been around for over 100 years and has proven itself to be indispensable to the electricity system, can respond very quickly if the system requires it, similar to other forms of storage. Its unique benefit is that it can store and then flexibly generate electricity over a sustained period of time. Pumped Storage offers significant benefits to the GB electricity system in terms of capacity, balancing services and flexibility, particularly as the energy system moves towards an increasing amount of variable generation capacity.



Coire Glas the story so far

In December 2013 SSE was granted planning approval for a 600MW pumped storage hydro scheme at Coire Glas. This consent remains valid until 2021. Despite the obvious benefits that pumped storage offers, progressing the Coire Glas scheme requires overcoming a number of commercial and regulatory challenges. These include changes in the existing transmission charging regime for pumped storage and a satisfactory and supportive long-term public policy and regulatory framework.

Coire Glas 2017

SSE submitted a scoping request for a revised scheme on 12th May 2017. The revisions to the consented scheme now being proposed are intended to provide options for better aligning the project with the current and future market framework and thereby aiding delivery of the project.

We are proposing to increase the generating capacity of the project from the consented 600 megawatts (MW) up to 1500 MW. This increase in capacity will, however, bring little change to the current external elements of the scheme with the majority of the changes being in the underground space required to house the larger turbines and pass the increased flow rates of water and as such will not be visible.

Key Points

- The majority of changes to the scheme will be in the underground space required to house the larger turbines and pass the increased flow rates of water, and as such will not be visible.
- There is no proposal to increase the size of the previously consented upper reservoir.
- The amount of rock excavated from the underground works will increase compared to that previously consented.
- The requirement for a surface intake tower and a surge shaft to respond to fluctuations in pressure within the tunnels is currently being assessed.
- There will be an increase in the footprint of the lower tailrace and outlet structures.
- There is no proposal for the maximum and minimum levels in either the upper or lower reservoirs to be outside the limits previously consented.
- All access routes in and out of the site would remain the same as previously consented, with little anticipated additional traffic during the operational life of the scheme.

What happens next?

Scoping Opinion

The Scottish Government are currently seeking responses from various statutory and non statutory consultees to the Scoping Report submitted by SSE in May 2017. From this consultation, the Scottish Government will form a Scoping Opinion and this will identify the issues that should be assessed in the Environmental Impact Assessment in support of a Section 36 application to the Scottish Ministers.

Environmental Impact Assessment (EIA)

On receipt of the Scoping Option, a number of environmental surveys and impact assessments will be undertaken by professionally qualified specialists to assess the potential effects of the proposed scheme. The following topic areas are expected to be covered:

- Landscape Character and Visual Amenity
- Terrestrial Ecology (Habitats and Animals)
- Ornithology
- Fish and other Aquatic Ecology
- Water, Geology and Soils
- Noise and Air Quality
- Cultural Heritage
- Land Use and Recreation
- Traffic and Transport

The outcome of these surveys will be detailed within an Environmental Statement (ES) which will accompany the Section 36 application. On submission of the application, consultees and and the wider public will be able to formally comment on the finalised proposals.

APPENDIX 3: PUBLIC EXHIBITION BOARDS (JUNE 2017)

Coire Glas Pumped Storage Scheme

About SSE

SSE is one of the UK's largest energy companies and is headquartered in Perth. Our purpose is to provide the energy people need in a reliable and sustainable way. We're involved in producing, distributing and supplying electricity and gas and we provide other energy-related services, to homes in Great Britain and Ireland. We are the only company listed on the London Stock Exchange with such a balance of energy businesses.



NETWORKS: Our electricity networks transmit and distribute electricity to around 3.7 million businesses, offices and homes through some 130,000km of overhead lines and underground cables.

SGN's gas networks distribute gas to around 5.7 million homes, offices and businesses via 75,000km of gas mains. **RETAIL:** We are involved in the supply of electricity and gas and in other energy-related services such as electrical contracting to business and household customers.

We supply electricity and gas to around 8.02 million household and business accounts in the UK and Ireland. WHOLESALE: Our wholesale business comprises the production and storage of gas, the generation of electricity and energy portfolio management.

We are one of the UK's largest generators of electricity with 10,577MW of capacity.

Being responsible : Sustainability is embedded throughout all of SSE's different business operations. For us, it's about being responsible in all that we do. Our 2016 Sustainability report contains information about our

approach to managing our social, environmental and economic impacts.



The right thing to do:

We are one of the UK's largest Living Wage employers which means that our employees – and increasingly our contractors – earn an hourly rate that exceeds the national minimum

wage.

Paying our fair share:Since 2014, we haveremained the only FTSE100company with the Fair TaxMark – an independentaccreditation forbusinesses that proactivelydemonstrate they pay theright tax, in the right placeat the right time.

SSE Coire Glas Pumped Storage Scheme

The story so far

In December 2013 SSE was granted planning approval for a 600MW pumped storage hydro scheme at Coire Glas. This consent remains valid until 2021. Despite the obvious benefits that pumped storage offers, progressing the Coire Glas scheme requires overcoming a number of commercial and regulatory challenges. These include changes in the existing transmission charging regime for pumped storage and a satisfactory and supportive long-term public policy and regulatory framework.

Since obtaining consent, SSE has been working with key stakeholders including the Scottish Government, Department for Business, Energy and Industrial Strategy (BEIS), OFGEM and other bodies with the aim of achieving the necessary electricity market recognition of the benefits that pumped storage hydro will bring to the electricity market and its wider socioeconomic benefits.



Coire Glas 2017

SSE submitted a scoping request for a revised scheme on 12th May 2017. The revisions to the consented scheme now being proposed are intended to provide options for better aligning the project with the current and future market framework and thereby aiding delivery of the project.

We are proposing to increase the generating capacity of the project from the consented 600 megawatts (MW) up to 1500 MW. This increase in capacity will, however, bring little change to the current external elements of the scheme with the majority of the changes being in the underground space required to house the larger turbines and pass the increased flow rates of water and as such will not be visible. External elements of the project, such as the dam, upper reservoir, construction access, jetty and administration building, being of a similar size and nature to that of the already consented development.

Key Points:

- The majority of changes to the scheme will be in the underground space required to house the larger turbines and pass the increased flow rates of water, and as such will not be visible;
- There is no proposal to increase the size of the previously consented upper reservoir;
- The amount of rock excavated from the underground works will increase compared to that previously consented;
- The requirement for a surface intake tower and a surge shaft to respond to fluctuations in pressure within the tunnels are currently being assessed;
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Coire Glas Pumped Storage Scheme

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SSE owns and operates 1,150MW of conventional hydro electric capacity across 50 hydro electric power stations in Highland, Perth and Kinross and Argyll and Bute. A further 300MW comes from its pumped storage facility at Foyers, on Loch Ness.



How does Pumped Storage Work?

Hydro pumped storage, a technology which has been around for over 100 years and has proven itself to be indispensable to the electricity system, can respond very quickly if the system requires it, similar to other forms of storage. Its unique benefit is that it can store and then flexibly generate electricity over a sustained period of time. Pumped Storage offers significant benefits to the GB electricity system in terms of capacity, balancing services and flexibility, particularly as the energy system moves towards an increasing amount of variable generation capacity.

Pumped storage schemes involve two bodies of water at different heights. During periods of low demand for power, electricity is used to pump water from the lower loch to the upper reservoir. The water is released to create energy at a time when demand is high. A key advantage of developing a pumped storage scheme at Coire Glas is the site's proximity to a large lower reservoir (Loch Lochy). There is significant elevation of around 500m between the upper and lower reservoir sites over a relatively short distance.



Image Edited from : Scottish Construction Now

Coire Glas Pumped Storage Scheme

The proposed scheme

The proposed scheme is situated to the south west of Laggan Locks. The upper reservoir works, including the construction of the dam, would be accessed off the A87 at Whitebridge utilising existing forestry tracks and the creation of a new track to the dam site. The lower reservoir works, including the outlet area and excavation of rock for the underground works, would be accessed off the A82 at North Laggan.

Dam and Upper Reservoir

The site of the proposed dam lies within a "bowl" shaped valley with relatively steep slopes. The maximum dimensions of the dam would be a crest length of approx. 650m with a height above ground level of 92m. A borrow pit would be established within the reservoir area to produce rock to construct the dam,



and for concrete operations. This reduces the requirement for offsite hauling of rock fill and aggregates to the project.

Underground Powerhouse and Waterway System

The most significant change of the proposed 1500 MW pumped storage scheme will be underground and not visible. The powerhouse complex which will house the larger turbines together with a number of tunnels consisting of the headrace tunnel, high pressure tunnel, tailrace tunnel and access tunnels will all be constructed underground.

Outlet Area

The outlet area would comprise of an administration building and jetty, tunnel portals and tailrace structure. Excavation of all underground works would commence at the outlet area, with excavated rock being brought to surface through the access tunnel.

Access Tracks

Access tracks during construction and operation of the scheme would utilise existing public roads and forestry tracks where feasible, with a new access track required to access the dam site. The existing minor public road off the A82 from North Laggan would be improved to include widening and potential upgrades to bridges.

View west towards dam site



Model of proposed underground powerhouse



Grid Connection

SSE has applied to National Grid for a grid connection. National Grid will then require the system operator (SSE's regulated business Scottish and Southern Electricity Networks) to provide the connection, which will be subject to a separate planning application to the Scottish Government in due course.

View of outlet area from A82



Existing forestry track

Coire Glas Pumped Storage Scheme

What happens next?

Scoping Opinion

The Scottish Government are currently seeking responses from various statutory and non statutory consultees to the Scoping Report submitted by SSE in May 2017. From this consultation, the Scottish Government will form a Scoping Opinion and this will identify the issues that should be assessed in the Environmental Impact Assessment in support of a Section 36 application to the Scottish Ministers.

Environmental Impact Assessment (EIA)

On receipt of the Scoping Option, a number of environmental surveys and impact assessments will be undertaken by professionally qualified specialists to assess the potential effects of the proposed scheme. The following topic areas are expected to be covered:

- Landscape Character and Visual Amenity;
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- Ornithology;
- Fish and other Aquatic Ecology;
- Water, Geology and Soils;

- Noise And Air Quality;
- Cultural Heritage;
- Land Use And Recreation; and
- Traffic And Transport.

The outcome of these surveys will be detailed within an Environmental Statement (ES) which will accompany the Section 36 application. On submission of the application, consultees and the wider public will be able to formally comment on the finalised proposals.

Planning Programme Timeline

Task / Milestone	Anticipated Timescale
Scoping Report Submission	May 2017
Consultee and Public Responses to Scoping Report and Early Consultation	June / July 2017
Scoping Opinion from the Scottish Government	July 2017
Environmental Survey Work and Preparation of the ES	Through to December 2017
Follow Up Local Public Exhibition	November 2017
Section 36 Application Submission to the Scottish Government	March 2018
Consultation Process and Public Responses	March to August 2018
Anticipated Scottish Government Decision Due	End 2018

Coire Glas Pumped Storage Scheme

This Exhibition

Exhibitions such as this are a very important part of the development process for us. The purpose of this exhibition is to engage with the local community and interested parties about our proposals and the work we have undertaken so far. The exhibition is a chance for us to share our plans and is a opportunity for people to raise questions, concerns, ideas or comments that can be considered as part of the development process.

We will be returning to talk to you in November 2017 to update you on our progress. In the meantime we will be sharing updated information on the project micro site: www.sse.com/coireglas



View east over Loch a' Choire Ghlais

Keeping in touch

Please take the opportunity at this exhibition to speak to our project team today and ask questions about the proposal. SSE would welcome the submission of comments in respect of the proposal. If you have a few minutes please complete the exhibition feedback form.

Alternatively please contact the Projection Liaison Manager Corinna Scholes at:

Email : <u>corinna.scholes@sse.com</u>

Tel: 07342 027420

Address: 1 Waterloo Street, Glasgow. G1 6AY

APPENDIX 4: PUBLIC EXHIBITION ADVERT (FEBRUARY 2018)



Public Exhibition

Coire Glas pumped storage proposal

SSE is submitting a revised planning application for the Coire Glas pumped storage scheme at Loch Lochy.

We are holding a public exhibition in order to provide the local community the opportunity to meet members of the project team and discuss our proposals.

For those not able to attend the exhibition event copies of the exhibition boards will be available for download from the project website (www.sse.com/coireglas) from Wednesday 1st March.

The planning application will be submitted to the Scottish government for review in March 2018. The full application will be available for review online at www.energyconsents.scot/on For questions about the project, please contact, Corinna Scholes : Corporate Affairs, SSE, 1 Waterloo Street, Glasgow, G1 6AYT: +44 (0)7342 02742 Email:<u>corinna.scholes@sse.com</u>

Date: Tuesday 27th February Time: 3pm – 7pm

Location: Glengarry Community Hall Invergarry PH35 4HG

APPENDIX 5: PUBLIC EXHIBITION BOARDS (FEBRUARY 2018)

Coire Glas Pumped Storage Scheme About SSE

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We are a Living bugge Employer The right thing to do: We are one of the UK's largest Living Wage employers which means that our employees – and increasingly our contractors – earn an hourly rate that exceeds the national minimum wage. Paying our fair share:Since 2014, we have
remained the onlyFTSE100 company with
the Fair Tax Mark – an
independent accreditation
for businesses that
proactively demonstrate
they pay the right tax, in
the right place at the right
time.



Our history is in Hydro

SSE's heritage is rooted firmly in the hydro-electric revolution of the 1940's and 1950's, an energy transformation that changed lives and built livelihoods. SSE played a proud role in Scotland's hydro, which began in 1943 with the Hydro Electric Development Act. This delivered electricity across the Highlands and dramatically improved the lives of hundreds of thousands of Scots. Today SSE remains one of the UK's largest generator of renewable energy, in keeping with its historic aim to provide safe and reliable energy for all.

SSE owns and operates 1,150MW of conventional hydro electric capacity across 50 hydro electric power stations in Highland, Perth and Kinross and Argyll and Bute. A further 300MW comes from its pumped storage facility at Foyers, on Loch Ness.



How does Pumped Storage Work?

Hydro pumped storage, a technology which has been around for over 100 years and has proven itself to be indispensable to the electricity system, can respond very quickly if the system requires it, similar to other forms of storage. Its unique benefit is that it can store and then flexibly generate electricity over a sustained period of time. Pumped Storage offers significant benefits to the GB electricity system in terms of capacity, balancing services and flexibility, particularly as the energy system moves towards an increasing amount of variable generation capacity.

Pumped storage schemes involve two bodies of water at different heights. During periods of low demand for power, electricity is used to pump water from the lower reservoir to the upper reservoir. The water is released to create energy at a time when demand is high. A key advantage of developing a pumped storage scheme at Coire Glas is the site's proximity to a large lower reservoir (Loch Lochy). There is significant elevation of around 500m between the upper and lower reservoir sites over a relatively short distance.



Why do we need pumped storage

In a time where demand for energy is growing, much work is being carried out to meet the challenges energy consumption presents. Over the last 15 years as the UK works to meet decarbonisation targets the make-up of the UK energy network has changed. We have shifted from a grid driven by fossil fuels to a more mixed network. While research into batteries carries on pumped storage is a proven technology that is well placed to help provide a secure supply of energy across the UK, and especially in an energy system with high levels of renewable generation.

Its extremely **short response times** means that pumped storage can help provide short term balancing services to the grid such as in the event of an unexpected plant failure, as cover for variable renewable generation, or to respond to sudden increases in demand. They can start generating electricity in less than 15 seconds when in a spinning cycle and within just 2 minutes from rest.

Pumped storage is also the most efficient of currently available storage technology, at up to 80%, and is able to store and flexibly provide reliable capacity over an extended period of time. Pumped storage can provide load balancing, facilitating the integration of variable renewable generation, as well as contributing to security of supply, through supporting a diversified energy system.

Reduction in cost to the customer:

- Reduction in wholesale price;
- Reduction in the cost of managing transmission network constraints;
- Reduction in the cost on bills of the Contracts for Difference support scheme;
- Reduction in the cost to the System Operator to compensate renewable generators

Societal Benefits:

- The societal benefits, which could bring customers value for money, valued at around £70m per annum in 2030.
- Reduction in variable costs of generation
- Reduction in capital & fixed costs to the system by reducing the need for alternative generation
- Reduction in the cost of curtailing wind
- Reduced need for investment in transmission network reinforcement.

Beneficial services to the system:

- Frequency regulation, including rotating inertia
- Dynamic load following
- Voltage regulation

Black start capacityReserve (Fast, STOR etc.)

The challenges facing new pumped storage schemes

Pumped storage scheme are large capital projects, and similar to other large scale renewables generation or interconnection, they require a major capital-intensive infrastructure investment requiring a long lead time and stable policy outlook. Once developed, pumped storage has a long operational life, with low operational costs.



The story so far

In December 2013 SSE was granted planning approval for a 600MW pumped storage hydro scheme at Coire Glas. This consent remains valid until 2021. Despite the obvious benefits that pumped storage offers, progressing the Coire Glas scheme requires overcoming a number of commercial and regulatory challenges. These include changes in the existing transmission charging regime for pumped storage and a satisfactory and supportive long-term public policy and regulatory framework.

Since obtaining consent, SSE has been working with key stakeholders including the Scottish Government, Department for Business, Energy and Industrial Strategy (BEIS), OFGEM and other bodies with the aim of achieving the necessary electricity market recognition of the benefits that pumped storage hydro will bring to the electricity market and its wider socio-economic benefits.

Coire Glas 1500MW

SSE submitted a scoping request for a revised scheme on 12th May 2017. The revisions to the consented scheme now being proposed are intended to maximise the potential of the site and provide options for better aligning the project with the current and future market framework, thereby aiding delivery of the project.

We are proposing to increase the generating capacity of the project from the consented 600 megawatts (MW) up to 1500 MW. This increase in capacity will, however, bring little change to the current external elements of the scheme with the majority of the changes being in the underground space required to house the larger turbines and pass the increased flow rates of water and as such will not be visible. External elements of the project, such as the dam, upper reservoir, construction access, jetty and administration building, will be similar in size and nature to that of the already consented development.

Key Points:

- The majority of changes to the scheme will be in the underground space required to house the larger turbines and pass the increased flow rates of water, and as such will not be visible;
- There is no proposal to increase the size of the previously consented upper reservoir;
- The amount of rock excavated from the underground works will increase compared to that previously consented;
- Inclusion of a surface intake tower and a surge shaft to respond to fluctuation in pressure;
- There will be an increase in the footprint of the lower tailrace and outlet structures;
- The flow rate of water being transferred between the upper and lower reservoirs would be greater, however, it is not intended to manage Loch Lochy outwith the existing level range (as per the already consented development); and
- All access routes in and out of the site would remain the same as previously consented.

SSE

Coire Glas Pumped Storage Scheme

Environmental Impact Assessment

Following submission of the Scoping Report in May 2017, the Scottish Government sought comments from statutory and non-statutory consultees to identify the issues that should be assessed in the Environmental Impact Assessment (EIA).

Over the last nine months a number of environmental surveys and impact assessments have been undertaken by professionally qualified specialists to assess the potential effects of the proposed scheme. The results of these assessments will be reported within an EIA Report. The key aspect of the assessment activities is to assess and present the 'worst case scenario' for consideration in determination of the application.

What has been assessed?

- Landscape Character and Visual Amenity
- Terrestrial Ecology (Habitats and Animals)
- Ornithology
- Fish and other Aquatic Ecology
- Water, Geology and Soils

- Noise And Air Quality
- Cultural Heritage
- Land Use And Recreation
- Traffic And Transport
- Forestry
- Socio Economics

Consideration of technical feasibility and environmental constraints identified through rigorous and

extensive survey effort, in combination with consultation with various statutory and non-statutory environmental agencies and local communities, has led to the finalised scheme we are presenting today.

This will be presented in the Section 36 submission to be made to Scottish Ministers in March 2018. At this point the proposed development will be open to public consultation and comment from a wide range of consultees with the final decision to be made by Scottish Ministers.

SSE Coire Glas Pumped Storage Scheme

The proposed scheme

The proposed scheme is situated to the south west of Laggan Locks. The upper reservoir works, including the construction of the dam, would be accessed off the A87 at Whitebridge utilising existing forestry tracks and the creation of a new track to the dam site. The lower reservoir works, including the outlet area and excavation of rock for the underground works, would be accessed off the A82 at North Laggan.

Dam and Upper Reservoir

The site of the proposed dam lies within a "bowl" shaped valley with relatively steep slopes. The maximum dimensions of the dam would be a crest length of approx. 650m with a height above ground level of 92m. A quarry would be established within the reservoir area to produce rock to construct the dam, and for concrete operations. This reduces the requirement for offsite hauling of rock fill and aggregates to the project.



View west towards dam site

Underground Powerhouse and Waterway System

The most significant change of the proposed 1500 MW pumped storage scheme will be underground and not visible. The powerhouse complex which will house the larger turbines together with a number of tunnels consisting of the headrace tunnel, high pressure tunnel, tailrace tunnel and access tunnels will all be constructed underground.

Model of proposed underground powerhouse

Outlet Area

The outlet area would comprise of an administration building and jetty, tunnel portals and tailrace structure. Excavation of all underground works would commence at the outlet area, with excavated rock being brought to surface through the access tunnel.



Access Tracks

Access tracks during construction and operation of the scheme would utilise existing public roads and forestry tracks where feasible, with a new access track required to access the dam site. The existing minor public road off the A82 from North Laggan would be improved to include widening and potential upgrades to bridges.



View of outlet area from A82



Existing forestry track



Frequently Asked Questions

How many people will the scheme employ?

Throughout the construction of the project an average of 500 people will be employed, based both on and offsite. A variety of skillsets will be required to construct the project from skilled engineering roles to administrative and support staff roles. Once operational the scheme will employ up to 20 permanent staff based at Coire Glas full time. With an operational life expectancy of up to 75 years the scheme will provide long term jobs and a pipeline of apprentice opportunities.

How long will it take to construct?

It is anticipated the main civil engineering construction period would last up to seven years. This construction period is based on a 1500 MW scheme. It is anticipated that the construction programme could be reduced were a smaller capacity scheme be developed.

Does double capacity mean double the size?

Increasing the generation capacity doesn't mean the scheme will be double in size, in fact many of the external elements of the scheme will remain the same. The main change to the scheme will be found underground, in the turbine hall and tunnels. Double the energy production does not mean double the impact.

What will the impact be on the water level of Loch Lochy ?

The water levels of Loch Lochy are currently controlled by SSE Generation Ltd (SSE) at its existing Mucomir power station at at Gairlochy. The permitted operating regime of Loch Lochy is defined by SEPA under the Controlled Activities Regulations (CAR) licence. Should the scheme receive consent it will operate under a similar CAR Licence to at present: the level of the loch could rise and fall more frequently and at a faster rate during operation but it is expected to remain generally within its current consented level range. Once the final configuration of the scheme has been decided following consent, detailed studies will be carried out to confirm the frequency and rate of loch level fluctuation, which will then be agreed with SEPA as required by the planning conditions.

Would the scheme cause flooding if generating energy when the level of Loch Lochy is already high?

The scheme will operate under the current CAR Licence and would be prohibited from increasing the level of the loch above its current maximum operating level. If the level of the loch is at its maximum level the scheme would be prevented from discharging water into Loch Lochy.

Will the project effect users of the Caledonian Canal?

SSE has been working closely with Scottish Canals throughout the development of the consented scheme and most recently with the development of the proposed 1500MW scheme. Loch Lochy forms part of the Caledonian Canal which joins the loch at Gairlochy and at Laggan locks. The CAR Licences held by SSE for Mucomir Power Station (see above), and by Scottish Canals for operation of the canal stipulate maximum and minimum operating levels for the loch, and these will remain the same as currently licenced ensuring there is no impact on canal navigation.

Will SSE make use of the Caledonian Canal during construction?

SSE has a long history of using the Caledonian Canal as far back as bringing power to the highlands in the 1940's and 1950's. Most recently the canal was used to transport equipment and materials during the construction of Foyers Pumped Storage scheme, located on the banks of Loch Ness in the mid 1970's. It is SSE's intention to utilise the Caledonian Canal system as far as practicable in the delivery of equipment and materials for the project, as well as in the transportation of tunnel spoil away from the site.

How will you move the rock spoil from the site?

Various transport options have been reviewed for the export of surplus spoil material from site. This review concluded that, for the 'worst case scenario', no single transport method would be sufficient to handle all of the spoil by itself. Therefore, it is anticipated that a combination of options, using the canal, road haulage, and use of the spoil in construction would be required. The existing consent includes a planning condition requiring SSE to confirm final spoil volumes, end users, and transport proposals to the satisfaction of the Planning Authority one year in advance of construction commencing, and it is anticipated that a similar condition would be imposed should this application be consented.

Will access to the Great Glen Way be maintain during construction?

SSE has committed in the currently consented scheme to working with The Highland Council and their outdoor access team to maintain access to the Great Glen Way throughout construction. This commitment will continue with the new planning application.



Grid Connection Process

Whilst not part of the Section 36 Application being presented today, how the proposed scheme will be connected to the grid is a commonly asked question. Developments like Coire Glas must formally request to be connected to the National Grid. The grid connection would be a separate project and would be delivered by the area network operator. Below is an overview of how the grid connection process works and who is involved.



Developer submits an application for grid connection for their project to the system operator; National Grid

nationalgrid

System operator reviews the application and engages with the Network Operator to design the connection for the project



Network operator reviews the application and creates a design for connection



Network operator presents connection design to external stakeholder for consultation. Following a consultation process a Section 37 application is submitted to the Energy Consents Unit of the Scottish Government.

Important Information:

SSE Generation and SSEN are both part of the SSE Group, and under the Utilities Act 2000 they are legally required to operate as separate businesses. For this reason the Coire Glas Pumped Storage planning application and the associated grid connection application require separate applications.



SSE's Contribution to Society

SSE is very proud of its history, and the contribution it has made to society since it began operating. SSE is committed to contributing to the UK economy at both a local and national level. In 2016/2017 SSE activities contributed £9.3bn to the UK economy and supported 108,000 jobs. 2016/17 also saw SSE make it's largest contribution to the Scottish economy since we started reporting our contribution six years ago. This represents 1.4% of the Scottish economy.

Local Business Opportunities



We recognise that SSE has a significant role to play in contributing to the economic well-being and sustainable development of the communities we operate within. SSE is therefore committed to demonstrating exemplary levels of engagement with local suppliers. Our approach is to ensure that as many local businesses and people as possible benefit from the opportunities a development such as Coire Glas can bring with them. Throughout the development and construction phase, and into operation, we will look to utilise the services and skills of local businesses which ensures that our projects have a lasting positive effect in the local area.

As well as direct employment, our experience shows that other local businesses such as accommodation providers, shops and suppliers benefit directly, particularly during the construction phase of our projects.

These opportunities do not end once the scheme is operational. As an established member of the community there may be opportunities for local businesses to undertake maintenance work across the site which could include the provision of plant or materials, fencing and drainage work, road repairs and building maintenance.

Working with communities

At SSE we operate a leading community investment programme, delivering financial support to a diverse range of community projects near to our developments in the UK and Ireland. It is our policy to keep discussions community benefit separate from the consenting process. Should the project be granted planning permission and move into construction our community investment team would then meet with the community councils surrounding the project to discuss funds. SSE is committed to providing a community benefit for Coire Glas Pumped Hydro Scheme, linked to the construction of the project.

SSE seeks to be an active contributor to the communities in which it works and lives in. Through our Be the Difference scheme, each of our 20,000 employees can take a day away from their usual job and give a helping hand to a community project of their choice.





CONSULTATION

PROCESS

Site selection

SSE carried out a thorough review of potential pumped storage sites in Scotland which resulted in Coire Glas being identified as a suitable site in 2010.

Site feasibility studies

Feasibility studies were carried out to fully evaluate the viability of the project and help shape its design.

FORMAL **PUBLICATION**

Public consultation and first exhibition

Public exhibition is held in the local community to enable local people to find out more about our

proposal and discuss them with members of the project team. All comments received are considered during the EIA process and may influence the final design of the site.

We are here

Second public exhibition The final site design is presented to the public ahead of the application being submitted. February 2018

Consultation period

A statutory period of consultation is undertaken by the Scottish Government for the

Scoping

In May 2017 a Scoping Report was submitted to statutory and nonstatutory consultees, including local Community Councils, to obtain feedback and help define the scope of an Environmental Impact Assessment (EIA).

Environmental baseline studies

Desk based assessments, consultation and field studies have been completed which identified the current (baseline) environment for the EIA. This information was used to design the layout of the site.

Preparation of the EIA Report

The impacts of the proposed scheme are assessed using the baseline information collected and in line with various guidance and good practice guidelines. The findings are presented in an EIA Report.

Next Steps

Submission of Application

The application will be submitted to the Scottish Government Energy Consent Unit accompanied by the EIA Report. Copies are sent to the consultees, including The Highland Council and the local community councils and are made available for public viewing.

Scoping Report – May 2017

Section 36 Application and Environmental Statement. March 2018

proposed development. Consultees, interested parties and the public have the opportunity to comment on the proposed development.

Comments on the application are made directly to the Scottish Government.

Consideration of the Application

The Scottish Government assesses the application against planning and energy policies, together with consultee and community feedback and provides a recommendation to the Scottish Ministers.

Determination of the Application

The Scottish Ministers will decide if consent should be granted based on the recommendation of the Energy Consents Unit of the Scottish Government.

Coire Glas Pumped Storage Scheme

This Exhibition

Exhibitions such as this are a very important part of the development of projects such as Coire Glas. The purpose of this exhibition is to engage with the local community and interested parties about our proposals and the work we have undertaken so far. The exhibition is a chance for us to share our plans and is an opportunity for people to raise questions, concerns, ideas or comments.

We intend to submit our planning application to the Scottish government in March 2018. In the meantime we will be sharing updated information on the project micro site: www.sse.com/coireglas



View over Loch a' Choire Ghlais

Keeping in touch

Please take the opportunity at this exhibition to speak to our project team today and ask questions about the proposal. SSE would welcome the submission of comments in respect of the proposal. If you have a few minutes please complete the exhibition feedback form.

Alternatively please contact the Project Liaison Manager Corinna Scholes at:

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SSE Coire Glas Pumped Storage Scheme

Visualisations



Photomontage from A82



Photomontage from Ben Tee



Photomontage from Aberchalder