FEARNA STORAGE

Fearna Pumped Storage Hydro Scheme
EIA Report

Chapter 1 - Introduction

February 2025

Quality Information

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1. Introduction

1.1 Background Information

1.1.1 Fearna PSH Ltd. (hereafter referred to as "the Applicant") is proposing to construct the Fearna Pumped Storage scheme, located approximately 25km west of Invergarry, as shown in **Figure 2.1 – Location Plan**. The proposals, for which consent under Section 36 of the Electricity Act 1989[1] will be sought by the Applicant, are referred to in this report as 'the Proposed Development' and are described below. The application for Section 36 consent is being prepared on behalf of the Applicant by Gilkes Energy Ltd., (hereafter referred to as "the Developer").

1.1.2 The function of the Proposed Development would be to create a large-scale long duration electricity storage (LDES) scheme with up to 1,800MW generation capacity to store and release energy to or from the electricity transmission system, to help balance supply and demand for power at a national scale. The electricity storage capacity of the Proposed Development will be in the region of 36 GWhr, which equates to approximately 20 hours of generation at 1,800 MW. This would make it one of the largest electricity storage facilities in the UK, providing a very significant contribution to the Scottish Government's commitment to pumped storage hydro, as set out in the Scottish Energy Strategy[2].

1.1.3 As the Proposed Development comprises an electricity generating station with a generation capacity of greater than 50 MW, an Environmental Impact Assessment (EIA) is required to accompany the Section 36 Application under the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017[3] (hereafter referred to as "the EIA Regulations"). It falls within the definition of Schedule 2 development contained in regulation 2(1) of the EIA Regulations. The Developer has voluntarily agreed to prepare an EIA Report in accordance with the EIA Regulations, rather than requesting a Screening Opinion. Deemed planning permission under Section 57 (2) of the Town and Country Planning (Scotland) Act 1997[4], as amended, will also be sought.

1.1.4 A request for a Scoping Opinion was made to the Scottish Ministers under Regulation 12 of the EIA Regulations on 23rd February 2024. A Scoping Report was submitted to support the request, which sought input from statutory and non-statutory consultees regarding the information to be provided within an EIA Report to accompany a Section 36 application under the Electricity Act 1989. A Scoping Opinion was received from the Scottish Ministers on 3rd July 2024.

1.1.5 This EIA has been carried out by the Developer, Gilkes Energy Ltd. A table presenting relevant qualifications and experience of key staff involved in the preparation of the EIA is included in **Appendix 1.1 – EIA Specialist Team** of this EIA Report.

1.2 The Applicant

1.2.1 The Applicant, Fearna PSH Ltd, is joint venture between a consortium led by the Developer, Gilkes Energy Ltd (GEL) and Scottish and Southern Energy Renewables (SSER). GEL specialises in the development of hydro power projects in the UK, including PSH, and comprises a multi-disciplined development team which includes engineering, consenting, project management, operations, commercial, financial and legal expertise. GEL is supported by an industry-leading team of specialist technical consultants.

[1] The Electricity Act 1989. Available at: https://www.legislation.gov.uk/ukpga/1989/29/contents [Last Accessed July 2024].

[2] Scottish Government, 2017. The Scottish Energy Strategy. Available at: https://www.gov.scot/publications/scottish-energy-strategy-future-energy-scotland-9781788515276/ [Last Accessed July 2024].

[3] The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (as amended). Available at: https://www.legislation.gov.uk/ssi/2017/101/contents/made?regulation-4-5 [Last Accessed July 2024].

[4] Town and Country Planning (Scotland) Act 1997 (as amended) Available at: https://www.legislation.gov.uk/ukpga/1997/8/contents [Last Accessed July 2024].

1.3 The Proposed Development

1.3.1 The layout of the Proposed Development is shown in **Figure 1.1 – Scheme Layout with Grid References**. The Proposed Development would operate by transferring water between a lower reservoir, the existing Quoich reservoir, and an upper reservoir created by raising the natural level of Loch Fearna. The reservoirs would be connected by a system of underground waterways, with an underground powerhouse by the shore of the Quoich reservoir. The principal components of the Proposed Development would be:

- Loch Fearna – the upper reservoir;
- The underground waterway system;
- Loch Quoich – the lower reservoir;
- The powerhouse and switchyard;
- Access tracks and footpaths; and
- Temporary construction facilities and borrow pits.

1.3.2 The Proposed Development is described in more detail in the EIA Report in **Chapter 2 – The Proposed Development**.

1.3.3 The Proposed Development would include a significant package of habitat compensation and enhancement works, both within the site and adjacent landholdings. These would include:

- peatland restoration;
- native tree planting (including riparian planting);
- removal of non-native flora including rhododendron and exotic tree species within areas of Caledonian pine forest;
- habitat restoration and enhancement to promote the successful breeding of species cited in the West Inverness-shire Lochs SPA and SSSI; and
- Habitat restoration and enhancement and other measures to promote an increase in the number of salmon in the River Garry catchment.

1.3.4 These proposals would demonstrably contribute significantly to the enhancement of biodiversity, including restoring degraded habitats and building and strengthening nature networks and the connections between them.

1.4 Associated Works

1.4.1 A grid connection, comprising, is required to connect the Proposed Development to the national electricity grid. For regulatory reasons, this will be subject to a separate consenting process with Scottish and Southern Electricity Networks Transmission ("SSEN Transmission") as the applicant. The locations of the grid connection infrastructure have yet to be confirmed by SSEN Transmission and have therefore not been considered in this EIA Report.

1.5 Site Context

1.5.1 The Proposed Development would be situated within the boundaries of a number of landholdings approximately 25km to the west of Invergarry. Access from the A87 to the site for construction would be taken on a route to the south of Loch Garry, the Southern Access Route (SAR), passing through generally forested areas before traversing open moorland. The final section of access to the site would be along the existing public road, the C1144, which would be widened locally. The main PSH works, comprising the upper and lower reservoirs and associated works, are situated approximately 1km to the west of the Quoich Dam.

1.5.2 The main PSH site comprises south and southwest-facing slopes and corries of upland blanket mire, heathland, and flush habitat; burns with associated riparian woodland; acid grassland, bracken, mire, and heath habitats in the lower-lying ground and a rock shingle beach along the shoreline of Loch Quoich. M15 wet heath is the most widespread community within the survey area, followed by M17 blanket bog, and M25 mire. No woodland would be affected by the main PSH works, however the Southern Access Route (SAR) would impact on some native and commercial woodland. No ancient woodland would be affected by the main PSH works.

1.5.3 The site is used for highland sports, commercial forestry, hydroelectric generation and recreation. The Applicant is working closely with landowners to ensure any potential adverse effects on their existing interests are minimised.

1.5.4 The site is located entirely within the upper catchment of the River Garry. Loch Fearna outfalls via the Allt Fearna to Loch Quoich. Loch Quoich was dammed in the 1950s at both its east and west ends to create the storage for the Quoich Hydro project. Loch Quoich operates on a 26m vertical range, therefore is already subject to significant modification by hydropower infrastructure including dams, a reservoir with fluctuating water levels and associated drawdown scarring, an intake tower, control building and a power station downstream.

1.6 Purpose of the EIA Report

1.6.1 The purpose of this EIA Report is to present the findings of the environmental impact assessment carried out for the Proposed Development. In doing so, the EIA Report identifies any likely significant environmental effects of the Proposed Development during construction and operation.

1.6.2 Running concurrently with the design process, the EIA has sought to:

- Identify the likely environmental effects of the Proposed Development;
- Define appropriate design and construction measures and good practice to mitigate likely significant environmental effects and maximise opportunities for environmental enhancements resulting from the construction and operation of the Proposed Development; and
- Determine the level and significance in the context of the EIA Regulations of the likely residual environmental effects from the Proposed Development remaining after all proposed mitigation and enhancement measures have been taken into account.

1.7 Structure of the EIA Report

1.7.1 This EIA Report describes the results of the EIA for the Proposed Development. This includes a detailed description of the Proposed Development and its surroundings, an overview of the design process, and technical assessments with associated reports by individual environmental topic.

1.7.2 The EIA Report comprises:

- **Volume 1- Main Text** - contains the introductory and specialist environmental assessment Chapters, and is structured around the chapter headings as set out in **Table 1.1 – EIA Report Chapters**;
- **Volume 2 - Figures** - figures relating to the EIA Report chapters;
- **Volume 2a - Confidential Figures** - figures which are only provided to certain authorised parties due to the nature of the information within them.
- **Volume 3a – Visualisations to NatureScot Standards** - photomontages to NatureScot standards, demonstrating how the Development will sit within the surrounding landscape;
- **Volume 3b – Visualisations to the Highland Council Standards** - photomontages to the Highland Council standards, demonstrating how the Development will sit within the surrounding landscape;
- **Volume 4 - Appendices** - supporting Appendices to the EIA Report; and

- **Volume 4a - Confidential Appendices** - supporting Appendices which are only provided to certain authorised parties due to the nature of the information within them.

Table 1.1 - EIA Report Chapters

Chapter	Chapter Content
Chapter 1	Introduction
Chapter 2	The Proposed Development
Chapter 3	Consideration of Alternatives and Design Evolution
Chapter 4	Assessment Methodology, Scoping and Consultation
Chapter 5	Planning and Policy Context
Chapter 6	Hydrology and Water Management
Chapter 7	Landscape and Visual
Chapter 8	Terrestrial Ecology
Chapter 9	Forestry
Chapter 10	Ornithology
Chapter 11	Aquatic Ecology
Chapter 12	Geology, Soils and Water
Chapter 13	Land Use
Chapter 14	Recreation and Access
Chapter 15	Transport and Access
Chapter 16	Noise and Vibration
Chapter 17	Socioeconomics and Tourism
Chapter 18	Cultural Heritage
Chapter 19	Mitigation Schedule
Chapter 20	Glossary and List of Abbreviations

1.8 EIA Specialist Team

1.8.1 The Developer recognises that the Proposed Development may give rise to some environmental effects. Specialist consultants have therefore been appointed by the Developer to provide expert knowledge on the environmental topics scoped into the EIA, as follows:

- Planning: Savills plc and Brodies LLP;
- Hydrology and Water Management: Gilkes Energy Ltd, Mott MacDonald Limited;
- Landscape and Visual: ASH design+assessment Ltd;
- Terrestrial Ecology: EnviroCentre Ltd;
- Forestry: Upland Forestry Ltd;
- Ornithology: Mike Coleman Ecology;

- Aquatic Ecology: Gavia Environmental Ltd;
- Geology, Soils and Water: SLR Consulting Ltd;
- Land Use: Gilkes Energy Ltd;
- Recreation and Access: Gilkes Energy Ltd
- Cultural Heritage: Catherine Dagg;
- Traffic, Access and Transport: Pell Frischmann;
- Noise and Vibration: SLR Consulting Ltd; and
- Socioeconomics and Tourism: MKA Economics Ltd.

1.8.2 Other inputs relating to the construction and future maintenance of the Proposed Development have been provided by the Developer and the Applicant. The assessment of potential environmental effects and preparation of the EIA has been co-ordinated on behalf of the Applicant by the Developer.

1.8.3 A table presenting relevant qualifications and experience of key staff involved in the preparation of this Chapter is included in this EIA Report at **Appendix 1.1 – EIA Specialist Team**.

1.9 Supporting Documents

1.9.1 The following supporting documents will be submitted along with the EIA Report as part of the Section 36 Application:

- A Non-Technical Summary (NTS) – this is a summary of the findings of the EIA Report in non-technical language;
- A Planning Statement - this considers the acceptability of the Proposed Development in the context of planning policy; and
- A Shadow Habitats Regulations Appraisal (HRA) Report (Stage 1 & 2) for the West Inverness-shire Lochs SPA – this is provided to assist the competent authority's Appropriate Assessment of the likely significant effects of the Proposed Development on this designated site.

1.10 Additional Consents

1.10.1 It is recognised that additional consents and licenses are required for the construction and operation of the Proposed Development. These may include the following:

- Controlled Activities Regulation (CAR) Licences;
- Water Abstraction Rights under Section 10(5), Shedule 5 of the Electricity Act 1989;
- Reservoir registration under The Reservoirs (Scotland) Act 2011;
- European Protected Species licences; and
- Consents for felling and planting of woodland;

1.10.2 The EIA Report contains information in support of these additional consents.

1.11 Local Supply Chain

1.11.1 The Applicant is committed to proactively engaging with the local supply chain to ensure that local companies are aware of and know how to tender for, contracts related to the Proposed Development. As part of its commitment to developing these relationships, the Applicant would engage with local suppliers as part of the development and procurement process. Furthermore, the Applicant is actively engaging with industry bodies and institutions to assist with the development of the skills and supply chain required to build and operate these types of project.

1.12 Notification and Availability of the EIA Report

1.12.1 In accordance with Regulation 4 of the Electricity (Applications for Consent) regulations 1990, and Regulation 14 of the EIA Regulations, the application will be advertised in the Edinburgh Gazette, The Herald and the Lochaber Times. The advert will describe the application, state where hard copies of the EIA Report are located, state a date by which any persons can make representations to the Scottish Ministers in relation to the application, and the address to where representations are to be sent.

1.12.2 In accordance with Regulation 18 of the EIA regulations, copies of the EIA report will be available to view on the application website at:

- https://www.fearnastorage.co.uk

1.12.3 Copies of the EIA report will be available to view on at the following websites:

- http://wam.highland.gov.uk/wam/
- http://www.energyconsents.scot/

1.12.4 Hard copies of the EIA Report will also be available to view at the following locations:

- The Highland Council Headquarters, Inverness; and
- The Invergarry Post Office, Invergarry.

1.12.5 Additional copies of the EIA Report may be obtained from Gilkes Energy Ltd at a charge of £30 on a USB drive or £600 per hard copy. Enquiries can be made via:

- email: info@gilkesenergy.com
- by post to: Earba Ltd, Canal Head North, Kendal, Cumbria, LA9 7BZ

Representations

1.12.6 Any representations to the application may be submitted:

- by email to the Scottish Government, Energy Consents Unit mailbox at representations@gov.scot ; or
- by post to the Scottish Government, Energy Consents Unit, 4th Floor, 5 Atlantic Quay, 150 Broomielaw, Glasgow, G2 8LU, identifying the proposal and specifying the grounds for representation. Please note that there may be a delay in the Energy Consents Unit receiving representations by post.

1.12.7 Written or emailed representations should be dated, clearly stating the name (in block capitals), and postal address of those making representations. Emailed representations should also include the full return email address of those making representations. Only representations sent by email to representations@gov.scot will receive acknowledgement.

1.12.8 Representations to the Scottish Government will be copied in full to the planning authority, and made available to the public on request, unless individuals request otherwise.