PE2109/B: Halt any further pumped storage hydro schemes on Scottish lochs holding wild Atlantic salmon

Glen Earrach Energy written submission, 9 January 2025

Thank you for your letter (6 December 2024) asking for information from Glen Earrach Energy Ltd (GEE) about work that has been undertaken to understand the impact of pumped storage hydro schemes on wild Atlantic salmon.

GEE is a wholly owned subsidiary of Balmac Forest Ltd, the owner of the Balmacaan Estate in Scotland. We are developing a 30 GWh pumped storage hydro (PSH) project on the estate that is set to become the UK's largest, most water-efficient and sustainable PSH scheme. We anticipate delivering first power in 2030 and achieving full commissioning in 2032. It is estimated GEE's PSH scheme will cut post-2030 grid carbon emissions by over 10% and reduce grid running costs by over £3bn (NPV 2025-2050) over its first 20 years of operation (estimates provided by LCP Delta, Alpiq & AECOM).

Our project leverages a high hydraulic head (approximately 500 metres) – the vertical distance between the upper and lower reservoirs. That means we will be able to store more energy and generate more power than all other PSH projects on Loch Ness combined. This brings the greatest economic and strategic benefits to the UK for each cubic metre of Loch Ness water moved. It also means less water is required to be stored in the upper reservoir for the same amount of energy, reducing our environmental impact.

Community Engagement and Collaboration

As the landowner, we are committed to ensuring that our project benefits our local community and environment.

We initiated early engagement activities in April 2024, shortly after submitting our scoping report to the Scottish Government's Energy Consents Unit (ECU), to gather initial community feedback. We conducted four in-person early engagement sessions, reaching over 300 individuals. We also gathered initial community feedback through email and online channels. We then held four pre-application consultation events to gather further feedback on the emerging proposals.

By actively listening to community concerns and ideas, we have refined the project design. This includes minimising visual impact through reduced above-ground infrastructure, relocating the temporary construction compounds and providing temporary on-site accommodation to reduce traffic to and from site.

Environmental Assessment and Mitigation

In answer to the request raised in your letter around Atlantic salmon, our team of environmental experts are conducting a comprehensive range of studies to assess potential environmental effects, including on Atlantic salmon, as part of the aquatic ecology chapter. These studies will inform the development of avoidance and mitigation measures to minimise and manage any potential impacts. This information will be documented in our Environmental Impact Assessment Report (EIAR), which we plan to submit as part of our application to the ECU in March 2025.

We have proactively addressed environmental concerns raised by stakeholders and continue to work with them on issues raised.

Since May 2024, we have been actively engaging with the Ness District Salmon Fisheries Board (NDSFB), NatureScot, The Scottish Environment Protection Agency (SEPA) and The Highland Council. This collaboration includes commissioning a smolt tracking study by academic experts to enhance our understanding of smolt behaviour in Loch Ness which will be used to inform the operation of the scheme. This study, initiated in December 2024, is due to complete the surveying phase in the 2025 smolt season (April-June), with data being analysed in the summer of 2025. This smolt tracking data will be used to evaluate the EIAR assessment (which will have been informed by a study consisting of a detailed literature review and existing data on salmon smolt).

Further to conducting rigorous environmental impact assessments, it is important to note that GEE's 30GWh project is exceptionally water-efficient: as an example, for every 1,000 MWh (1 GWh) of
energy stored, GEE’s project would only change Loch Ness’s water level by around 1.5 cm.

GEE's approach prioritises minimising environmental impacts, while maximising the project's benefits. We look forward to continued collaboration with stakeholders, including NSDFB, the authors of the original petition, to ensure the project delivers positive outcomes for all. We will demonstrate all relevant impacts and mitigations in our EIAR, which SPICe rightly highlight will be necessary to gain planning consent. We will share our EIAR with the committee once finalised and welcome any further questions you might have.

Kind regards,

Roderick MacLeod
Director