

PE2159/E: Halt the production of hydrogen from freshwater

SEPA written submission, 3 November 2025

Thank you for your correspondence dated 2nd October 2025 regarding Petition PE2159.

Storegga Marypark Proposal (Edward Mountain MSP's reference)

SEPA has engaged in pre-application discussions with the developer of the proposed hydrogen facility at Marypark. The proposed borehole abstraction is for five hundred cubic metres per day (500,000 litres/day) - not 500,000 m³/day as previously suggested. This is 0.1% of the volume stated in the original claim.

A proportion of the abstracted water would be returned to the water environment after undergoing appropriate treatment, to meet the relevant regulatory and environmental standards. SEPA's initial review found the proposed activity to be within the acceptable environmental limits, but a full environmental assessment would be required before any permit could be issued. No formal application has been submitted to date.

To provide context:

- Agricultural abstractions on the River Spey range from 250 m³/day to 1800 m³/day.
- Distillery abstractions range from 1200 m³/day to 10,000 m³/day, with most of the water returned to the river as cooling water.
- The mean daily flow of the River Spey at Grantown is approximately 3,300,000 m³/day, highlighting the relatively small scale of the proposed abstraction.

SEPA's Permitting Process

All activities that may impact the water environment require authorisation from SEPA. Hydrogen production is regulated under the Water Environment (Controlled Activities) (Scotland) Regulations (CAR) and the Pollution Prevention and Control (PPC) Regulations. From November 2025, these will be replaced by the Environmental Authorisation (Scotland) Regulations (EASR), which streamline regulatory frameworks but do not alter the assessment criteria.

Under the regulations any abstraction exceeding 50 m³/day requires a permit. Applicants must submit detailed information, including:

- Hydrological surveys and monitoring data to assess water availability.
- Identification of potential receptors, such as ecosystems and other water users.
- An evaluation of cumulative pressures on the waterbody.

SEPA assess applications using the most current environmental standards, considering the capacity of the waterbody to support the proposed abstraction. In determining an application for authorisation under CAR/EASR, SEPA must assess the risk posed to the water environment by the proposed development, including cumulative effects with other activities. This ensures:

- Protection of the wider water environment.
- No negative impact on existing abstractors.
- No breach of environmental thresholds.

Details of how SEPA undertake such assessment are described in our published regulatory [methods](#).

Water Scarcity & Sector-Wide Restrictions

We have seen unprecedented water scarcity across Scotland's river systems in 2025, and SEPA have exercised its regulatory powers to restrict or suspend abstractions in affected areas. These restrictions apply equally across all sectors and would include hydrogen production where authorised. New permits may include stricter conditions, such as:

- Earlier cessation of abstraction during dry periods.
- Adaptive management clauses to respond to changing environmental conditions.

Hydro Licence – Upper Spey Catchment

The hydro licence referenced allows water to be diverted from the Spey catchment to Lochaber only when water is available. It includes conditions requiring the operator to:

- Release water downstream from Spey Dam to mitigate hydro scheme impacts.
- Scale back or cease diversions during dry weather to prioritise environmental protection.
- Use stored water to maintain river flows during low-flow periods.

Hydrogen Plant Discharges

Discharges from hydrogen facilities are regulated like any other industrial discharge and must meet Environmental Standards. Additionally, hydrogen production is classified as an Industrial Activity, and is subject to:

- Enhanced controls under PPC regulations/EASR.
- Demonstration of Best Available Techniques (BAT), which may impose stricter discharge limits than standard environmental thresholds.

Monitoring & Enforcement

If SEPA grant an authorisation, the facility will be subject to ongoing compliance monitoring. SEPA will:

- Conduct regular inspections.
- Review operational data.
- Take enforcement action in response to any breach or environmental harm, ensuring issues are resolved and do not recur.

I trust the above information is helpful, but should you wish to discuss the above matter further, please do not hesitate to contact ask@sepa.org.uk.

Data, Environment and Innovation