

Welsh Government Hydrogen Policy Consultation response

(<https://www.gov.wales/hydrogen-policy>)

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Consultation questions

You should read the full call for evidence and review the guidance for respondents (above in this document) before completing your response.

1. Do you agree with the proposed policy position set out in this document? If not, please indicate where you disagree and your reasons for disagreeing.
No response
2. Do you think the energy hierarchy within PPW is sufficient to inform planning officials in the development and employment of hydrogen within Wales? If not, do you think it needs to be reflected in further detail within PPW.
No response
3. What type of appropriate additional information or guidance would help give effect to this policy, for developers, investors and decision makers?

Geological storage of hydrogen is a central part of the hydrogen strategy and is mentioned in several of the documents that support the strategy.

Whilst options for cavern storage of hydrogen are not present onshore in Wales, there may be some limited opportunities offshore (East Irish Sea; Bristol Channel; Cardigan Bay). To better understand opportunities and scale for offshore cavern storage of hydrogen, we recommend a programme of evaluating relevant geological datasets that describe the subsurface in relevant areas.

In addition, options for storage in England could be explored – as stated in the “Future energy grid for Wales” document (Catapult).

Storage of hydrogen in offshore porous rocks, including depleted oil and gas reservoirs and saline aquifers, may offer an alternative to cavern storage. Some of the deeper porous rock stores may also be considered for permanent disposal of CO₂ (some of which could be a by-product of blue hydrogen production by steam methane reformation with Carbon Capture and Storage). To inform the development of a hydrogen policy that includes a requirement for geological-scale porous rock storage, we recommend that potential porous rock storage targets are evaluated and ranked, contributing to a roadmap for the development of hydrogen storage in Wales. This would form part of the evidence base that informs policy, investment and development decisions, allowing for a phased, strategically planned uptake of hydrogen storage in Wales.

Five hydrogen production facilities in Wales have been successful in application to the Hydrogen Allocation Rounds (HAR) 1+2. To enable security of supply and guarantee of service of hydrogen to end users, geological hydrogen storage will play a crucial role in the hydrogen economy. The Hydrogen Storage Business Model will most likely initially prioritise salt caverns for hydrogen storage.

Understanding Wales’s resource for salt either offshore (which is poorly understood) or in regions adjacent to Wales (as there is no salt resource onshore in Wales) would, therefore, be of interest to enable geological hydrogen storage.

4.

What type of organisation are you answering on behalf of e.g power generation, large industry user, SME, transport, academic, consultancy, individual?

Please provide the name of the organisation, where appropriate.

The British Geological Survey is a UK Government research institute (part of UK Research and Innovation). BGS Wales has a unique understanding of geological rock formations throughout the country. We have a large legacy sub-surface data set, which can be leveraged in support of any future potential Hydrogen storage projects in Wales. Based in Cardiff, BGS Wales work to provide geological information in support of local construction, environmental monitoring, and hazard reduction projects. The combination of a wide range of expertise directly applicable to geological Hydrogen storage, together with detailed knowledge of Welsh geology, makes BGS unique in being able to offer broad support to any organisation interested in Hydrogen storage in Wales.

The BGS have produced policy documents, open reports and academic research on underground hydrogen storage, including:

- “*Making the case for underground hydrogen storage in the UK.*” Policy Briefing, 2025 (<https://www.bgs.ac.uk/news/making-the-case-for-underground-hydrogen-storage-in-the-uk/>)
- “*Assessing the demand for geological hydrogen storage: Building a strategic case for investment in the east coast cluster.*” IDRIC, 2024 (<https://www.arup.com/globalassets/downloads/insights/a/assessing-the-regional-demand-for-geological-hydrogen-storage.pdf>)
- “*Does the United Kingdom have sufficient geological storage capacity to support a hydrogen economy? Estimating the salt cavern storage potential of bedded halite formations.*” Williams et al. 2022. ([Does the United Kingdom have sufficient geological storage capacity to support a hydrogen economy? Estimating the salt cavern storage potential of bedded halite formations - ScienceDirect](#))

5.

We would like to know your views on the effects that 'Hydrogen production, storage, transportation and use' would have on the Welsh language, specifically on opportunities for people to use Welsh and on treating the Welsh language no less favourably than English. What effects do you think there would be? How could positive effects be increased, or negative effects be mitigated?

No response

6.

Please also explain how you believe the proposed policy could be formulated or changed so as to have positive effects or increased positive effects on opportunities for people to use the Welsh language and on treating the Welsh language no less favourably than the English language, and no adverse effects on opportunities for people to use the Welsh language and on treating the Welsh language no less favourably than the English language.

No response

7.

We have asked a number of specific questions. If you have any related issues which we have not specifically addressed, please use this space to report them:

No response