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Comment

Comment on 'Repurposing Hydrocarbon Wells for Geothermal Use in the UK: The Onshore Fields with the Greatest Potential. Watson et al. (2020)'

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Comment: We wish to comment on factual inaccuracies around the purpose of the UK Geoenergy Observatory in Glasgow (GGERFS) in the recent *Energies* paper by Watson et al. (2020) [1], and the use of an estimated figure from their own work for the resource size, prior to any borehole testing.

In Section 5.2 of [1], comparison on resource size includes the Glasgow Geothermal Energy Research Field Site, part of the UK Geoenergy Observatories. This is misleading as (i) the resource size quoted is an estimate by the same authors [2] who note themselves that 'detailed calculations depend on the hydrology, which has not yet been determined', and (ii) the Glasgow Observatory is a research infrastructure as opposed to being designed for the purpose of maximum heat abstraction.

In [1], the authors then go on to further criticise the scale, depth and cost of the Glasgow Observatory. However, the observatory is not a demonstrator for the maximum abstraction and supply of heat; as a research infrastructure with much wider capabilities, it aims to enable the evidence base, processes and innovation around low-temperature mine water energy resources and environmental management in a representative urban area close to heat users [3–5]. The cost of the observatory includes boreholes and fenced compounds for research incorporating numerous sensors, a wide range of open data including environmental baseline boreholes and monitoring equipment, a contribution to IT infrastructure for open data, etc., that would not be part of a commercial heat production facility. These aspects of [1] are likely to cause misunderstandings for future UK Geoenergy Observatory users, as they do not accurately represent the context of the facility and the way in which it will be used for research.

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