Peter McGrath
Net Zero, Energy and Transport Committee
The Scottish Parliament
Edinburgh
EH99 1SP

4th May 2023

Scotland's electricity infrastructure: inhibitor or enabler of our energy ambitions?

Dear Mr McGrath,

Thank you for the opportunity to respond to the Committee's inquiry into Scotland's electricity infrastructure. We appreciate the chance to provide our perspective and offer recommendations on this important topic.

As a company focused on energy storage, with 2.5GW of pumped storage hydro (PSH) and 2GW of battery projects, we believe these technologies will play a crucial role in enabling a secure transition to a net-zero energy system in Scotland.

In response to your specific questions:

3. What role will dispatchable* electricity sources - pumped hydro, battery technologies, thermal generation (hydrogen power, gas with CCS) - play in ensuring security of supply and system resilience? Should any other technology play a role in supporting Scotland's electricity system?

Dispatchable electricity sources such as pumped hydro and battery technologies will be key to ensuring security of supply and system resilience as Scotland transitions to a net-zero energy system. With their ability to store large amounts of energy and dispatch it when needed, these technologies can help balance intermittent renewable generation and maintain grid stability. While other dispatchable technologies such as thermal generation with hydrogen power or gas with CCS may also play a role, we believe that pumped hydro and battery technologies are the most viable and cost-effective options for Scotland and Great Britain.

4. What are the key barriers to deploying these technologies and how should they be addressed?

There are several key barriers to deploying energy storage technologies in Scotland. These include a lack of long-term investment signals, insufficient grid connections, and regulatory barriers that limit the ability of energy storage to participate in energy markets. To address these challenges, we recommend that the Scottish Government supports market reforms that support the deployment of energy storage technologies. These should include long-term contracts for energy storage services, speeding up grid connections, and regulatory reforms that enable energy storage to participate more fully in energy markets.

5. Do proposed UK Government reforms to the electricity capacity market align with the Draft Energy Strategy?

We consider the proposed UK Government reforms to the electricity capacity market are unlikely to align with the Draft Energy Strategy. In our view, there is little prospect that these reforms alone will enable the deployment of flexible, low-carbon technologies such as pumped storage. The high

upfront capital costs of pumped storage means that long-term contracts are needed to attract investment.

Pumped storage projects in Scotland bring significant flexibility and locational benefits to the power system and have low lifetime costs. Market signals are needed so that customers can receive these benefits, but these are absent from the capacity market reform proposals. The capacity market also needs to allow access to pumped storage projects that will take longer to construct than the T-4 auction timescales.

In addition, alongside these capacity market reforms, the UK Government must deliver as quickly as possible on its commitment to introduce long-term investment support, such as a 'cap and floor' mechanism for long-duration storage, to unlock the full potential of these technologies.

Thank you for your consideration, and we look forward to continuing the dialogue on Scotland's electricity infrastructure.

Sincerely,

Mark Wilson

CEO