

Dear Allan Rankine,

My name is Jesus Talamantes-Silva, and I am the Director of Research, Design, and Technology at Sheffield Forgemasters, a company owned by the Ministry of Defence. I would like to provide minor comments on the consultation regarding the RIIO-2 NZASP Re-opener Draft Determinations for the East Coast and Hyline Cymru Hydrogen Network FEED Studies, on behalf of Sheffield Forgemasters.

Over the last few years, several government reports have investigated the use of hydrogen as a green combustion fuel and a possible substitute for natural gas. However, barriers must be overcome to carry out this fuel replacement, and critics of the hydrogen economy cite cost, viability, and safety as significant concerns. Nevertheless, the government and industry like ours, which are heavy consumers of natural gas, currently hold the opinion that hydrogen is a viable natural gas replacement.

Despite the momentum gathering around the use of hydrogen as a combustion fuel, without further progress in hydrogen generation, distribution, and combustion furnaces, viable hydrogen as a natural gas replacement will not be possible. The only real way to alleviate these concerns is through technical advances, infrastructure investment, and demonstrations, which can be underpinned by feasibility and FEED studies.

I was particularly interested in section 4 of the consultation and Q2. From our perspective, the assessment carried out meets two of our key objectives: the possibility of accessing a distribution line and the potential to reduce our CO₂ emissions, of which 90% come from natural gas if we ignore electricity consumption.

Our company currently consumes around 10 million m³ of natural gas per year, 80% of which is used to fuel its furnace fleet (approximately 15,000 tCO₂e). Hydrogen has repeatedly been outlined as necessary for 'difficult to electrify' sectors, such as industrial furnaces, to decarbonise.

We have explored various decarbonisation technologies, but it is evident that a significant amount of hydrogen will be necessary to decarbonise site operations. The volume needed is too large to be transported by tube trailers, which means that constructing a hydrogen pipeline to Sheffield is essential for successful decarbonisation.

Since Sheffield is 'off-cluster,' this project is essential to determining whether it will be connected to the hydrogen supply network. Without this connection, SFEL will be unable to develop further plans for large-scale hydrogen adoption.

Best Regards

Jesus.