

Written Evidence Submitted by ITM Power (HNZ0093)

We estimate a subsidy requirement of approximately £2b for green hydrogen adoption across the period to 2030, in order to initiate and establish the early market (based on the assumption that green hydrogen meets all of the government's 5GW target for 2030). On an annual basis we expect the amount of support to grow rapidly and then decline as 2030 approaches due to the falling costs of renewable electricity, electrolyzers, fuel cell vehicles and other technologies in the supply chain. We note that some of the financial support could be afforded by redirecting or improving existing policies (e.g. the RTFO and the Bus Services Operators Grant which currently incentivises diesel use), and by using revenue generated from implementing a carbon tax upon conventional fuels.

To achieve this we assume that helpful policies and regulations will be introduced in the near future to promote the use of green hydrogen in the transport sector, industry and the gas grid, so that electrolyzers of the capacities required by each of these applications can be deployed progressively to maintain a good match between supply and demand as the market grows. We are not expert in the design of the required policies, but it is clear that some emerging hydrogen applications require support to help them scale up, while others are established and require grey hydrogen to be supplanted with green hydrogen. It is also clear that the financial value of hydrogen per kg varies in each sector in relation to whether it is being used to displace diesel vehicles, natural gas combustion or grey hydrogen feedstock. Therefore we see a need for policymakers to address the following issues:

- Electricity grid fees, levies and tariffs paid by electrolyzers across all sectors.
- The RTFO, BSOG, VAT level and future target numbers for hydrogen refuelling stations and fuel cell vehicles for the transport sector.
- A policy mechanism to progressively replace the existing use grey hydrogen, used mainly by large industrial processes and the merchant hydrogen market, with green hydrogen.
- A feed-in-tariff or similar for injecting green hydrogen into gas networks.
- Achieving short term progress on the ground, rather than a long term 'hydrogen economy' vision.

Yours faithfully

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