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| Network Innovation Competition 2020 Supplementary Answer form | | |

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| Project Name | H100 Fife | | |
| Question number | #21a | Pro forma section | 6 |
| Question date | 10/09/20 | Answer date | 14/09/20 |
| Question summary | Does the scale of the H21 ambition not dwarf the current project? | | |

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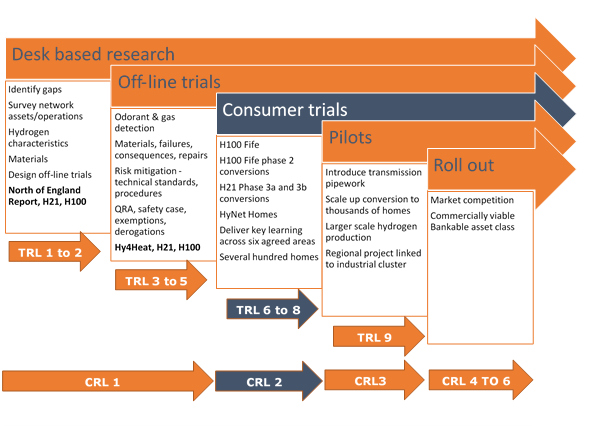
## Answer (please retain document formatting and do not exceed 2 pages unless otherwise agreed with Ofgem)

H21 Leeds Citygate was an excellent techno-economic vision piece which undoubtedly raised the profile of hydrogen as a decarbonisation solution and accelerated research in this space.

Within the gas networks’ business plans and through the Hydrogen Programme development group, chaired by BEIS, a key national programme of research, development and demonstration has been identified to support emerging customer needs for decarbonised energy. We have collectively set out a portfolio of work to deliver evidence for transformation of the gas network in the form of a pathway to decarbonisation. There are two key strands to this pathway; the safety, technical and practical evidence to demonstrate that the gas network and associated infrastructure can distribute Hydrogen and; how the hydrogen solution would be delivered in each region.

The research follows the scientific method (see figure below), with many connected components of research and development progressing through technology readiness level, underpinning a programme of live trials as detailed in the Integrated Hydrogen Trials programme produced for BEIS, which in turn will enable at scale pilots from 2024 onwards, largely aligned with the industrial clusters and renewable energy rich zones identified below. The earmarked £800m CCUS Infrastructure Fund[[1]](#footnote-1) seeks to support carbon capture in at least one of the clusters bidding in the first phase of funding. Aberdeen (St Fergus), Merseyside, Teeside and Humberside are arguably the leading candidates for early investment, others such as Southampton, Isle of Grain and South Wales are also attractive areas for hydrogen rollout. In addition, the Dolphyn project[[2]](#footnote-2) and Scotwind[[3]](#footnote-3) leasing round of the East Coast of Scotland, show significant ambition for green hydrogen production, both for indigenous use and export. The completion of national evidence will ensure that wherever the investment in green gas production is and customers that want it, in whichever region, the gas networks will be ready to facilitate it.

H100 Fife comprises of 5 phases seeking to deliver 1.5Mt of CO2e reduction per annum. The sixth phase is full integration of the East Coast and Central belt of Scotland, targeted for completion in 2035.



1. HM treasury (2020), *2020 Budget, Decarbonising power, industry and heat, pg. 80*. Available at: <https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/871799/Budget_2020_Web_Accessible_Complete.pdf> [↑](#footnote-ref-1)
2. ERM, BEIS, 2019, *Dolphyn Hydrogen Phase 1 - Final Report*. Available at: <https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/866375/Phase_1_-_ERM_-_Dolphyn.pdf> [↑](#footnote-ref-2)
3. Crown Estate Scotland (2020) ScotWind Leasing, Seabed leasing for new offshore wind farms. Available at: <https://www.crownestatescotland.com/maps-and-publications/download/476> [↑](#footnote-ref-3)