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| Network Innovation Competition 2020 Supplementary Answer form | | |

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| Project Name | H100 Fife | | |
| Question number | #21b | Pro forma section | 6 |
| Question date | 10/09/20 | Answer date | 14/09/20 |
| Question summary | What are they key differences between H21 and H100? | | |

## 

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

The H21 NIC and associated NIA projects currently underway form part of the necessary research and development for future network conversion. H21 Phase 1 is primarily focused on determining the requirements for intervention on existing gas network assets through development of a representative QRA and safety case for conversion. Test facilities at both Buxton and Spadeadam were also constructed to support future testing. H21 Phase 2 is focused on the network operation aspects, with a particular focus on a suite of national safety management procedures.

In parallel, H100 NIA programme, and associated projects, has undertaken significant research to support the safe demonstration of hydrogen and real-world operation of a hydrogen network, ensuring that learning is relevant for conversion phases too, for example odorant testing[[1]](#footnote-1). The H100 NIA project comprised 13 packages of work[[2]](#footnote-2). A primary focus of the H100 Fife project is to test and understand the customer acceptance and interest in hydrogen. The original H21 Leeds Citygate project did not pursue customer acceptance in its scope and assumed mandating of conversion within the target area. We do not believe that mandating of conversion to hydrogen is appropriate at this stage. Our project is designed with maximum flexibility for the customer, ensuring it is reversible and supports the social evidence for change. This information will provide vital insight into any future mandating of hydrogen conversion for customers, governments, and stakeholders.

Within the bid document, an abridged list of outcomes from the H100 Fife project are listed. There is also a table of outcomes for H100 Ph2 and H21 ph3 detailed in the Integrated hydrogen Trials (IHT) Programme document. Due to constraints of space we cannot list here, however are happy to provide.

1. SGN, NPL (2020) *H100 NIA: Hydrogen Odorant and Gas Detection*. Available at: <https://www.sgn.co.uk/about-us/future-of-gas/hydrogen/h100-nia/hydrogen-odorant-and-gas-detection> [↑](#footnote-ref-1)
2. SGN (2020) H100 NIA. Available at <https://www.sgn.co.uk/about-us/future-of-gas/hydrogen/hydrogen-100> and <https://www.smarternetworks.org/project/nia_sgn0105> [↑](#footnote-ref-2)