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| Network Innovation Competition 2020 Supplementary Answer form | | |

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| Project Name | H100 Fife | | |
| Question number | #31 | Pro forma section | 7 |
| Question date | 24/09/20 | Answer date | 28/09/20 |
| Question summary | How would the UNC need to develop to allow injection of different gases, system, operation and supply? How long is this expected to take to fit in the timelines of the project? What is the impact if this is delayed? | | |

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

Engaging with the UNC and ensuring effective communication is a necessary component of this project. Based on the engagement to date and legal advice, we do not anticipate that significant changes to the UNC will be necessary other than expanding the definition of gas to incorporate hydrogen (referenced in Section 7.3.2 and Appendix O (section 8) of our submission). For example, the modification would state that ‘gas’ is composed of mainly methane *and/or hydrogen* and be ring fenced for the trial area. In the event that additional changes to the UNC are necessary, we plan to further engage relevant stakeholders, for example shippers, the GDNs, to review and challenge the UNC requirements in the context of the project. Our intention is that this group will benefit from an engagement panel structure to ensure all the key relevant stakeholders are represented. We also have experts within SGN through the Regulation & Code team that are well placed to support this. The existing H100 Fife Regulation Working Group is already established and reports to the overarching internal Advisory Group. This Working Group, coordinated by the H100 Team, can be used to direct the UNC review group, providing project context as well as sharing the outputs with the gas networks that would benefit the delivery of other hydrogen projects.

Should there be any unforeseen amendments required beyond those identified in Appendix O, section 8 of the submission, will be progressed through the UNC group as proposed. This forms part of the acceptance criteria under stagegate 1 (March 2021) for acceptance of the regulatory model approach. We will aim to effect such amendments using the modification procedure in the usual way and ensure this process is clearly communicated to those that would benefit from this understanding.

Work can be undertaken through the UNC group to understand any wider implications of broadening the definition of gas to be inclusive of hydrogen beyond this demonstration project. Again, for the purposes of the H100 Fife demonstration, any proposed changes to the definition of gas is intended to be ring-fenced through a carve-out approach if beneficial.

The review of the UNC will be able to draw on the precedent for injecting hydrogen into the gas networks from work already undertaken, for example under the HyDeploy project that uses a 20% blend of hydrogen in the existing natural gas network. In this instance, a shipper notification process was followed in order inform shippers of the definition of gas applicable to the HyDeploy project. Other examples to support the precedent of amendments to the UNC include the ongoing work led by IGEM to produce the IGEM Gas Quality Standard. This is seeking to set a new Wobbe Index range of gases used with the UK network to facilitate the use of low carbon gases alongside or as a substitute to natural gas. The intended low Wobbe gas from the Cygnus Field was notified through the UNC for example. In addition, we have obtained learning and experience from the ‘Opening up the gas market’ project and subsequent incorporation where in changes were notified through the UNC successfully.

The timescale for the modification to the definition of gas, as well as any other possible amendments to the UNC, is expected to mirror the precedents above, and therefore is not anticipated to have a material impact on project delivery. We will closely monitor and manage this throughout the programme.