

WP4B: CLARIFICATION QUESTIONS & ANSWERS

Question Number	Question	Answer
1	Has there been any collaboration with other countries who have conducted their own hydrogen projects (Japan, Australia, France, Germany, Holland) will there be a global/European harmonisation for the standards?	This ITT relates to making the necessary components for low pressure hydrogen systems in buildings in the UK. This has not been addressed elsewhere.
2	Will the intended 98% hydrogen/2% oxygen be used on new PE pipelines only?	<p>Please refer to Annex E, in particular pages 76, 77 and 78 which outline the gas specification.</p> <p>Bidders need to focus on components for connection of hydrogen lines in buildings as indicated in the ITT. Hy4Heat does not cover upstream of the ECV, therefore does not include pipelines.</p>
3	Has work already been completed to show this mix solves the embrittlement issue?	This contract only concerns the operation of equipment less than 70mbarg. Evidence suggests that embrittlement is not a problem at or below this pressure. Manufacturers should reassure themselves of the suitability of any materials they choose to use.
4	What body will sit to agree upon the standards and test criteria for Industry approval?	<p>The ITT refers to the fact that this tender only requires a self-declaration from manufacturers that the product is safe for use with hydrogen. This is a similar process to what is currently carried out for natural gas products. Please see below:</p> <ul style="list-style-type: none"> - <i>“The contracts will run until March 2021 and are aiming to deliver: Appropriate ancillary equipment and fittings which would enable safe use of hydrogen as a fuel in providing heating requirements supported by self-declarations in this regard based on product technical files;” p. 12</i> - <i>“Certification and compliance: Delivered products will need to meet legal requirements for the UK with</i>

		<p><i>regards to safety and functionality. It is expected that the same self-declaration procedure as would be carried out for a natural gas product will be completed for the hydrogen product” p. 75</i></p>
5	<p>We have already selected the test house we intend to use, have any test houses already been involved in the Hydrogen project?</p>	<p>See item 4 regarding self-declaration. Individual contractors involved in Hy4heat have</p> <p><i>“Where testing is necessary to demonstrate functionality or compatibility with hydrogen, 3rd party testing is preferred although other routes may be used provided that they can be demonstrated to be reliable” p.18</i></p>
6	<p>Will we have access to the data of any work to date on previous trials?</p>	<p>This work package is not dependant on the other work being undertaken by the Hy4Heat Programme.</p>
7	<p>Lot 1 has a variety of products; will this be awarded as a complete lot or may award be broken down?</p>	<p>In line with the ‘Evaluation of Tenders’ criteria and weighting (page 32), those bidding for Lot 1 must provide a <i>“clear and comprehensive list of ancillary components required for the installation of hydrogen appliances”</i> (2i.a). This list is to be determined by the supplier. These proposed set of components should then be justified (2i.b).</p>
8	<p>What warranty period will be required for the low-pressure regulator assembly?</p>	<p>To be identical to those that are currently available for natural gas.</p> <p>The warranty period for all components developed should be in accordance with current Ofgem requirements (where appropriate) and industry best practice.</p> <p><i>As is in line with the ITT, “suppliers are encouraged to develop hydrogen capable alarms which are comparable on cost and function to those of natural gas approved devices currently in use”</i> (page 16).</p> <p>As such bidders should maintain the warranty period as being in line with the existing standard for natural gas equivalent appliances.</p>

9	Are you looking to source flexible hose products?	This ITT is looking to procure a range of gas products that would usually be found between the Emergency Control Valve (ECV) and the appliance to be declared safe for use with hydrogen. Flexible hoses fit within this brief.
10	What is the maximum/minimum upstream pressure range to which the pressure regulator can be subjected to in normal working conditions? Can you confirm these values? P <7bar is indicated on page 13.	<p>As this pressure regulator is to fulfil the same function as its natural gas counterpart, we would expect upper and lower pressure bounds under both normal and failure conditions to be equivalent to that for natural gas.</p> <p>There has been no change to the specification provided in the ITT.</p>
11	<p>a) Should the pressure regulators be certified according to EN 334 or according to other norms?</p> <p>b) Which third parties or laboratories are credited to perform and certify the tests and issue the related certification?</p> <p>c) If there is no indication of laboratories capable of performing the tests and issuing the required certifications, are in-house tests accepted or test performed by third parties identified by the contractor?</p>	<p>a) reference p75 of the ITT “Certification and compliance: Delivered products will need to meet legal requirements for the UK with regards to safety and functionality.”</p> <p>Manufacturers are advised to consider what existing standards or codes that typical natural gas components are required to meet. It is envisaged that hydrogen versions of the regulator may have to meet similar requirements to those of natural gas.</p> <p>b) We are not permitted to identify specific companies.</p> <p>c) reference p75 of the ITT “It is expected that the same self-declaration procedure as would be carried out for a natural gas product will be completed for the hydrogen product”</p> <p>Where the natural gas market currently requests third party testing, it is envisaged that a similar requirement may exist in the future for hydrogen.</p>
12	Page 82 / Table 2 (Colour code - Flow rates Nm ³ H ₂ / h): the flow rates indicated in the table seem to refer to air flow rates and not to H ₂ . Confirmation of the values shown in the table is required.	This table provides only a presentation of the colour coding system for natural gas EFVs in the standard referenced and is not a guide to the ratings of EFVs to be provided. There has been a transposition error and the flows in the table should refer to natural gas. The previous table, which describes the flow rates

		for different user types, provides guidance on the hydrogen flow rates required.
--	--	--