

Question One: It is not clear from the information provided how the project meets each of the specific requirements on page 3 of the proforma. Please provide additional information to clarify this for the three specific requirements you ticked –

Technical standards are the governing documents that define how every element of physical work the UK gas industry undertakes is carried out. These technical standards range from work procedures, management procedures and policies through to specifications for specific equipment and fittings. As part of the TS21 project all technical standards will be reviewed and updated incorporating international and cross industry best practice taking account of risk, cost and carbon considerations. NGN believe that as per the requirements of the NIC, the aforementioned approach to technical standards custodianship which the TS21 would adopt meets all of the criteria required by network submissions.

- The new (ie unproven in GB) equipment the project is testing

Every standard review (where possible) will look to actively create opportunities for the use of new products and equipment previously unproven in the UK, encouraging innovation based on international and cross industry benchmarking. In addition, technical standard G23 'The approval of products, equipment and techniques applied to the gas supply network' is currently out of date, impractical and in need of review. TS21 will carry out a practical upgrade to this standard, allowing the industry to call upon the specific engineering expertise of key universities, working collaboratively to create a swift and effective testing platform which will test the suitability of new and innovative products for implementation in to the UK gas network. A bi-product of this approach to product testing could potentially be significantly increased graduate interest in gas industry careers.

- The novel operational practice directly related to the operation of the gas transportation system (and how it is novel)

The gas transportation system is operated, managed and maintained in accordance with its technical standards. By modifying and updating each technical standard there will be opportunities to fundamentally change aspects of how the UK manages the gas system. For example, MSL1 'Mains and Service Laying' defines how networks undertake mains and service laying activities. An upgrade of this one standard incorporating international and cross industry best practice, as well as potentially new techniques and products, could fundamentally alter how the entire industry undertakes works of this nature. This example is applicable to each technical standard upgrade.

- The novel commercial arrangement (and how it is novel)

The TS21 projects aims to prove to the UK gas industry that technical standards should be managed, upgraded and disseminated from one centrally located, neutral body. Currently NGN and W&W are supportive of this position but NG and SGN have not committed to the process to date. Once the project is live quantifiable results will become evident and will upon request be shared throughout the industry. The ultimate vision of the project is to have a centrally and collaboratively funded 'centre of excellence' for the ongoing benefit of the UK gas industry. Without NIC funding to act as the catalyst to enable proof of concept, this position would not be possible to achieve.

Question Two: Please provide further information on how the project meets the innovative criterion (i) under the innovative and unproven business case section?

It is accepted that technical standards within the UK gas industry stifle innovation and are outdated and inefficient. Coupled with this there is also a general scepticism as to whether or not the UK gas industry has the ability to make significant change in its approach to updating technical standards for the betterment of the industry. Furthermore, there are also significant levels of cynicism surrounding the tangible benefits that can be achieved as a result of technical standard upgrade. This recognised problem in the industry has been around for decades but to date there has been no tangible vehicle to allow the industry to react and force change. NGN believe NIC has provided this platform.

Fundamentally addressing the core technical documents and upgrading them to be 21st century savvy will revolutionise the industry allowing innovation to be quickly and responsibly adopted, reducing BCF and reducing cost. TS21 will aim to prove that it is not only possible to efficiently review technical standards and subsequently improve industry performance, but it will also quantify the results in terms of carbon and cost reductions to the UK gas industry. This will hopefully provide the evidence required to develop a collaboratively funded model for a 'body of excellence' approach.

The funding required to accelerate development in this area is considerable and the benefits, whilst NGN believe could be significant, are unproven. As such NGN would not be prepared to fund this elevated level of risk within the low risk profile of the network.

Question Three: As you know, under the 'Project Partners and external resourcing/funding' criterion, you are required to provide evidence of the processes that have been followed and the rationale for selecting **BOTH** (i) **participants** and (ii) **ideas** for the project.

Noting the scale of this project, i.e. impacting on all technical aspects of the UK gas industry, NGN has adopted a high level of stakeholder engagement to develop project partners and structure TS21 for practical and successful delivery.

Once the original idea for TS21 was sufficiently developed, supported by a smaller NIA project, NGN embarked upon multiple meetings with various potential project partners and stakeholders. These meetings included:

- The other networks: The original objective was to put forward a UK collaborative bid. Wales and West have committed to the project to date, however NG and SGN have not committed to TS21 based on the unproven business case, but both acknowledged the merit in the TS21 proposal. NGN would hope to gain the support of NGN and SGN once the tangible benefits of TS21 can be quantifiably proven.
- IGEM: The recognised industry body who own and manage the IGE technical standard documents have supported the development of the idea and have provided a formal letter of support. IGEM have also worked to gain the support of other industry bodies based in both the UK and internationally, to help support the project if it is successful.
- Leeds University: To help support the establishment of a specialised university network for trialling and developing new projects and justifying changes to technical specifications.

- Specialist consultancies: to obtain favourable commercial rates for any work undertaken as part of the project in specialised areas.
- Product developers and manufacturers: To better understand the barriers (from their point of view) which are currently hindering the implementation of new products in to the UK gas industry.

Through these meetings NGN have been able to develop TS21 in to be a project that is both deliverable and addresses all the challenges associated with the UK gas industries out dated technical standards.