

Gas Distribution Price Control Review (Ref 203/06)

Third Consultation Document – November 2006

Advantica Response to Question on Innovative Funding Incentive

1. Context

Contained within the Ofgem Consultation Document 203/06 (Section 5, page 41) is the question – “*is there a case for an innovative funding incentive?*”. Advantica would like to offer the following comments in response to this question.

2. Background

- R&D provides a means to address the longer term challenges that face the industry and which fall outside other operational business activities. We view these challenges as being significant over the next 5-10 years as emphasised in Section 3 below.
- In contrast to this, over recent years we have seen a sharp decline in the level of our R&D activities as commissioned by the UK Gas Distribution sector as the industry focuses more efforts on projects that are able to deliver a short-term financial return.
- We consider the climate for R&D funding to be difficult at present in order to meet these future business challenges because the current funding approach does not support the development of longer-term technical programmes.
- Advantica has been at the heart of R&D and technological innovation in the UK gas industry for over 30 years. During this period, the vast majority of the funding has come from National Grid and its predecessor companies that formed British Gas.
 - Over the years many significant developments have been delivered that form the modern industry we see in the UK.
 - The R&D programmes were significant with annual values in excess of £80m, with the Gas Distribution programme being in the order of £30m.
 - The programmes involved both basic and applied research.
- In recent years we have witnessed a significant reduction, to the extent that our R&D programmes for Gas Distribution is in the order of £1m per annum. No basic research has been commissioned over the last five years.
- We are not aware of any other GDN commissioning R&D other than National Grid Gas.
- The involvement by the UK GDNs in collaborative research with R&D bodies outside the UK (e.g. GERG) has also reduced significantly.
- There is no evidence to suggest that the above trend will change.
- The majority of recent R&D activity focuses our effort on delivering projects that are able to deliver short-term financial return and on projects that are critical for complying with safety and regulatory demands.
- A number of the above points were highlighted at the World Gas Conference held in Amsterdam, 2006. At this Conference a report was given on the findings of a review of R&D within Gas Distribution, which concluded that recent trends in regulated GDNs resulted in focus on short term issues.

3. Engineering and Technical Challenges facing Gas Distribution Networks (GDNs)

The GDNs face a number of challenges, where innovative thinking and technologies are required to improve performance in the three key areas of safety, reliability and efficiency. The list below provides a few examples:-

- **Safety** – innovative thinking and solutions that will improve safety are of paramount importance and requires continuous investment. Basic research that is specific to the activity of a GDN will be of major benefit.
- **Security of Supply** – in a nation that is fast becoming a net importer of gas, security of supply is a major issue.
- **Gas Quality** – importing gas from a wide variety of sources present issues in maintaining consistent gas quality.
- **Storage** will feature highly within the security of supply debate. New and innovative solutions to improve our storage capacity would add real value.
- **Asset Management**
 - while the current 30 year mains replacement programme will improve the asset integrity and life of the distribution system, the industry cannot rely solely on current practice to deliver this programme. **Innovative pipeline renovation techniques** must feature in the years ahead to deliver performance improvements.
 - In addition to the above, the remainder of the infrastructure will be ageing and innovation in **maintaining system integrity** will present challenges in the future.
 - In the whole arena of asset management, the development of **decision support tools** that will allow optimum balancing of cost, performance and risk across the asset life-cycle are required.
- **Street Works** – excavation work is the most visible and disruptive activity of a GDN. In addition to the disruption, the environmental impact created by this core activity is coming under increased focus. Innovation that can minimise the impact in this area would be of major benefit.
- **Environment** – the pressure to improve environmental performance will undoubtedly increase. It is unlikely that current practice and technology will address future needs.
- **Data and Records Management** – the challenges in this area are recognised and innovative solutions are required.
- **Communications** – while developments in this area continue at pace, it is without doubt that innovation can help realise major developments in communication will aid a number of the challenges outlined above.

4. Advantica's Position on IFI

- Advantica is a strong advocate of innovation.
- We believe that focused innovation will deliver performance improvements in safety, reliability and efficiency for the GDNs
- These improvements will benefit all stakeholders, in particular the end users.
- The current trend of reduced R&D expenditure is detrimental to the industry.
- We believe that the way in which R&D is catered for in the current GDPCR framework is counterproductive to a robust long term R&D programme involving both basic and applied research. The five year cycle drives short term projects where the benefits can be realised over the period.
- This is exacerbated by the obvious pressures on the GDNs in financing and tackling, longer term business issues.

- The consultation document states that significant innovation is taking place, incentivised through the current price control mechanism. However, the examples quoted are programmes commissioned some time ago and similar programmes are no longer being commissioned.
- Advantica believe that an IFI would provide a mechanism to address the current conflict and enable a more coherent longer term strategy to be developed.
- In addition to the above, collaboration is clearly an issue in the newly formed GDN arena. There has been little evidence to suggest that the climate for collaborative R&D is positive currently. IFI could provide the catalyst for collaborative research.
- Introduction of IFI into the Electric sector has produced an 8-fold increase in R&D expenditure by the DNOs.

5. R&D Capability and Capacity

- An improved environment for R&D funding will increase technical and engineering capability to formulate and deliver innovation to support a vibrant industry.
- Further reduction in R&D programmes will further decrease capability and capacity, potentially to the point of removing capability from the industry.