

# Discussion Paper on Gas Network Extensions in Northern Ireland

16 May 2012

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# 1. Introduction

The issue of gas extensions to the west has been subject to discussion by DETI<sup>1</sup>. This discussion raised a number of important policy issues such as whether a subvention would be appropriate. These policy decisions are clearly matters for the department. However given the possibility of gas network extensions we thought it would be sensible to initiate a discussion on how a competitive process might be designed to deliver distribution and transmission extensions. This paper is only the start of the exercise and there will be further discussion and workshops before any final decisions are made.

## ***Purpose of this Paper***

The purpose of this paper is to seek the views of interested parties on a number of issues related to the potential extension of the existing natural gas network in Northern Ireland to new areas including, Tyrone, Fermanagh and south Londonderry and the east Down area. These issues include

- The principles to be used by the Utility Regulator to inform its approach to network extension in Northern Ireland;
- Issues in the design of the regulatory model. These will affect most particularly what companies may compete on;
- The issues the Utility Regulator should consider when designing a process to award a licence or licences required to extend the natural gas network in Northern Ireland.

The paper is presented on the assumption that more than one party will apply for a licence in any new licensed area. If only one person applies then the Utility Regulator

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<sup>1</sup> See DETI consultation on the potential for extending the natural gas network in Northern Ireland, June 2011

[http://www.detini.gov.uk/consultation\\_on\\_the\\_potential\\_for\\_extending\\_the\\_natural\\_gas\\_network\\_in\\_northern\\_ireland](http://www.detini.gov.uk/consultation_on_the_potential_for_extending_the_natural_gas_network_in_northern_ireland)

The responses to the consultation are available at:

[http://www.detini.gov.uk/responses\\_to\\_consultation\\_on\\_potential\\_for\\_extending\\_natural\\_gas\\_network](http://www.detini.gov.uk/responses_to_consultation_on_potential_for_extending_natural_gas_network)

would assess this application according to the existing award of licence process. It would therefore be useful to as part of this discussion process to establish the degree of interest amongst potential network developers in developing and operating extensions to the existing natural gas network in Northern Ireland. We request that any developer interested in obtaining the necessary licences should indicate this in their response to the discussion.

Q1. We request that any developer interested in obtaining the necessary licences should indicate this in their response to the discussion.

The role of this paper is to generate debate in order to ensure that future consultations are robust and cover all material issues. Nothing in this paper should be construed as indicating a decision as to what process the Utility Regulator will follow or view it may take on any aspect connected with a network extension. The Utility Regulator is at a very early stage in developing our thinking and so has not formed a final view on how the process will proceed.

### ***Structure of the document***

The document has the following sections:

- Section 2 sets out some background information, including on the high level study into extending the gas network which was led by DETI in 2009.
- Section 3 sets out principles to guide our approach to the network extension.
- Section 4 sets out issues in the design of the regulatory model. We have attempted to highlight those issues relevant to factors the companies may compete on.
- Section 5 sets out a number of issues which will influence the design of the award of licence process. Taking into consideration the issues outlined in the previous section we have also set out here those factors where we expect the companies may wish to compete.
- Section 6 sets out some considerations relevant to a future policy on extending existing networks and related to this the question of postalising distribution tariffs. These are issues that would require further consideration by DETI and the Utility Regulator.
- Section 7 Outlines the next steps

## ***Responding to this discussion paper***

We have set out a number of questions for respondents to answer and these are throughout the document and brought together in a template for responses at annex 1. Respondents should not feel confined to the specific questions proposed and may comment on any other issue they feel relevant to the issues under consideration in the paper. As stated above the role of this paper is to generate issues in order to ensure that future consultations are robust.

The Utility Regulator welcomes responses to the issues raised in this paper by 27 June. Responses should be sent to:

Graham Craig

Gas Branch

Utility Regulator

Queens House

14 Queens Street

Belfast BT1 6ER

[graham.craig@uregni.gov.uk](mailto:graham.craig@uregni.gov.uk)

There will be a public workshop during the week commencing 4<sup>th</sup> June and we will publish the date on our website once we have confirmed. This will be held in the offices of the Utility Regulator and those interested in attending should notify Graham Craig as soon as possible.

## 2. Background

### *The Development of the Natural Gas Network in Northern Ireland*

Natural gas was first introduced to Northern Ireland via the Scotland to Northern Ireland gas pipeline in 1996. Initially, natural gas was made available to customers in Greater Belfast, the immediate surrounding area and Larne where the gas distribution network in this area has been developed by Phoenix Natural Gas (PNG). PNG's business model is based upon making natural gas available to as many industrial and commercial, public sector and domestic customers as possible where it is financially viable to do so. By the end of 2011, natural gas was available to circa 280,000 properties in this licensed area, with approximately 150,000 of these actually connected to natural gas.

firmus energy (firmus), a subsidiary of Bord Gáis Eireann (BGE), is engaged in work to develop the natural gas market outside Greater Belfast along the routes of the North-West gas transmission pipeline, which was completed in November 2004, and the South-North gas transmission pipeline, which was completed in October 2006. This covers rolling out the gas distribution network in the 10 towns and cities of Londonderry, Limavady, Ballymena, Ballymoney, Coleraine, Newry, Craigavon, Antrim, Banbridge and Armagh. To date, firmus has connected around 13,000 customers in the 10 towns/cities licence area, including taking natural gas to some additional urban areas, such as Tandragee and Warrenpoint. The firmus business model differs from the PNG business model in that it is based on connecting key gas loads, i.e. primarily businesses, but also public sector buildings; social housing as provided by the Northern Ireland Housing Executive or housing associations; and new private housing developments. Domestic customers in existing owner-occupied private housing may be connected to the gas network if they are adjacent to routes developed to meet business demand for natural gas.

It is worth noting that the South-North and North-West gas transmission pipelines provided by BGE(UK) between 2004 and 2006 received Government funding of £38 million. However, the development of gas distribution networks in Greater Belfast and Larne areas, and the 10 towns licensed area served by the SN and NW pipelines was not funded by Government.

Maps of the existing distribution licence areas are contained in annex 2 below.

## ***Gas Network Regulation in Northern Ireland***

Each gas network utility in Northern Ireland operates under a slightly different regulatory model a brief outline of each of these models is set out below.

### **Gas Transmission**

Gas transmission tariffs in Northern Ireland are postalised, that is there is a single common capacity and single common commodity tariff for all gas transported across the Northern Ireland transmission system irrespective of the use made of the system. These postalised tariffs are paid into a common postalised revenue pot. The revenue from this pot is then divided between the transmission system owners on the basis of the allowed revenue that derives from their respective Gas Conveyance licence. There are currently two transmission system owners in Northern Ireland.

- Mutual Energy Limited own and operate both the Scotland to Northern Ireland Pipeline (SNIP) and the Belfast Gas Transmission Pipeline (BGTP) both these assets are mutualised and were purchased with a financial bond backed by all gas consumers in Northern Ireland. Due to the financing arrangements in place transmission assets are not subject to a normal revenue cap but instead all costs are treated as pass through items with consumers funding 100% of both capital and operating expenditure. There is however a periodic shadow price control so that that the Utility Regulator may assess the operating expenditure of the company.
- BGE (NI) owns and operates both the South North and North West Pipeline along with their associated spurs. These assets are subject to a traditional form of control with a revenue cap set every five years by the Utility Regulator.

### **Gas Distribution**

Gas distribution tariffs in Northern Ireland are not postalised and so each distribution company sets a tariff to raise either the allowed revenue or to match the price cap that derives from their respective licences. At present there are two distribution network owners in Northern Ireland.

- Phoenix Natural Gas owns and operates the distribution network in the Greater Belfast area and the retail market is now fully open to competition. The relevant aspects of the Phoenix regulatory model are capitalisation of opex expenditure and profiling of revenues so that over the recovery period unit distribution



charges remain steady. The form of control derives maximum allowed revenue which is then collected through distribution charges. The company does not take volume risk.

- Firmus owns and operates the distribution network in the ten towns area, supply exclusivity is still in place but this will be removed by April 2015. The relevant aspects of the firmus regulatory model are capitalisation of opex expenditure and profiling of revenues so that over the recovery period unit distribution charges remain steady. Unlike in the case of Phoenix Natural Gas the firmus regulatory model derives a maximum distribution tariff as opposed to a maximum allowed revenue. The company therefore is incentivised to increase volumes.

### ***The Gas Network Extension Project to Date***

In August 2009, the Department of Enterprise, Trade and Investment (DETI) , assisted by the Northern Ireland Authority for Utility Regulation (the Utility Regulator), commissioned a high level study to determine the technical and economic feasibility of extending the natural gas network in Northern Ireland.

The study considered a number of options in terms of geographical scope and business models, however all options required the construction and operation of both transmission and distribution networks.

Table 1 below summarises the outputs from this feasibility study.

In both Business Models the spine of the distribution network is constructed in the manner which most efficiently supports the connection of industrial & commercial supply points. In Business Model 1 only new build domestic supply points and those existing domestics which are adjacent to the distribution network are targeted for connection. In Business Model 2 however the distribution network is further extended to maximise the number of existing domestic supply points targeted for connection.

Figure 1: Estimated uptake of natural gas

Town	Business Model BM1			Business Model BM2		
	No. of Customers	Therms (Million)	GWh	No. of Customers	Therms (Million)	GWh
<b>Dungannon</b>	1,789	4.0	118	5,324	5.7	168
<b>Cookstown</b>	827	3.3	96	4,143	4.9	143
<b>Magherafelt</b>	614	1.1	33	3,160	2.3	68
<b>Omagh</b>	2,039	3.6	104	8,174	6.5	191
<b>Strabane</b>	957	2.8	82	4,710	4.6	135
<b>Enniskillen</b>	1,432	1.5	43	5,876	3.6	105
<b>Total</b>	7,658	16.3	476	31,387	27.6	810

The study estimated the cost of providing gas transmission networks to the six towns listed above to be around £75 million. Additionally, the respective gas distribution networks required to connect the gas to individual premises were estimated to cost between £26 million (BM1) and £86 million (BM2).

Drawing upon the findings of the feasibility study, the Department recently carried out a public discussion, ending 30 September 2011, on the potential for extending the natural gas network in Northern Ireland. The majority of responses to the Department's discussion, particularly those from the natural gas sector, local industry and the public sector, supported extending the natural gas network. Based on these responses, the Department is now considering how best to proceed in taking forward network extension.

As stated above a number of policy decisions will have to be taken by the Department of Enterprise Trade and Investment (DETI). These include approving any subvention and whether to postalise transmission tariffs.

The Utility Regulator will be responsible for the design and application of the award of licence process. In addition the Utility Regulator is responsible for the various conditions

contained within the awarded licence(s) which set out the regulatory regime within which the successful licensee will operate.

The Department will be responsible for carrying out an Outline Business Case which will form the basis of a paper to the Northern Ireland Executive Committee seeking approval for proceeding with the project and any subvention that might be required. It is anticipated that the Northern Ireland Executive Committee will make its decision in autumn 2012.

Should the Executive Committee decide to proceed with the project then the Utility Regulator will initiate an award of licence process by the end of 2012. It is anticipated that the necessary licence(s) will be awarded in 2013. Once we have more clarity on the process to be applied we will be in a better position to provide a more detailed timetable.

### **3. Principles to guide our approach to the network extension**

The Utility Regulator proposes to use a set of principles to guide our approach to the issues to be considered in extending the network and in particular to inform the design of the licence award process and regulatory model. The principles should be grounded in our statutory duties and we suggest that the following criteria could be appropriate:

1. *Efficient*

The regulatory model should result in efficient network operation which is most cost effective.

2. *Economic*

The arrangements should deliver the extension in a manner which takes account of all relevant costs and benefits.

3. *Result in a coordinated gas industry*

The extension should not lead to unwarranted fragmentation in system operation.

The arrangements should also allow scope for innovation and consider possible developments in the gas industry in the future such that any network built is future proofed to the degree possible.

4. *Promote the development of the gas industry*

The extension should be carried out in such a way that maximizes the potential scale of the gas industry by connecting as many customers as possible within the area of the extension and across Northern Ireland subject to the constraint that this should be done in an efficient and economic manner.

5. *Protect the interests of gas consumers (present and future)*

This principle overlaps with the others to some degree but in particular means that there must be an appropriate balance of risk and reward between customers and companies.

6. *In line with any applicable EU legislative requirements*

The arrangements should be consistent with applicable EU Directives and Regulations.

When judging any licence bids more particular criteria would be needed to assess the bids on a detailed level.

Q2: We would welcome views on whether the principles above are appropriate

## **4. Issues in the design of the regulatory model**

This section sets out a number of macro-themes that must be considered in the design of the regulatory model and in particular what companies will compete on for a licence. These are all interrelated to some degree.

- Risk sharing between consumers and licensees
- Incentivizing connections
- How to capture innovative ideas and future proofing the network

### ***Risk Sharing Between Consumers and Licensees***

In this section we consider the risks which may need to be shared between consumers and the licensed entities. Ultimately the balance of risk will be reflected in the rate of return at both transmission and distribution level. We expect that this will be an area where companies will wish to compete.

#### **Deviations between Tendered and Actual Costs**

Participation in the award of the distribution licence process will require the participants to estimate the capital and on-going operating costs of developing and operating the distribution networks. Based on these estimated costs and the rate of return required the Utility Regulator will be able to judge which potential licensee is likely to offer best value for money. However this approach could lead to participants under – estimating their costs in order to secure the licence, but then increasing the cost estimate whenever the first price control allowance is set. Even in the absence of such gaming there remains the strong possibility that the estimated costs during the award of licence process vary considerably from actual costs. This problem is exacerbated by the time between the award of the licence and the commencement of the project.

One solution to this would be to directly link the proposed costs in any bid to allowed costs once the licence has been granted. However this would place a lot of risk on licensees. An alternative would be to ask bidders to set out a cost structure they would apply in operating the network. This could include management structure, administration cost as percentage of total costs etc. Then future price controls would be done using the cost structure as a basis but still allow flexibility to deal with changes to things such as material prices.

The Utility Regulator will need to consider these issues more fully following receipt of respondents' comments on these issues.

Q3: We welcome views on how potential deviations between tendered and actual cost levels should be taken into account as part of the distribution award of licence process.

### **Transmission construction risks**

At transmission level there are greater risks associated with construction and so the Utility Regulator will need to consider how these risks should be shared between gas consumers and the party responsible for the construction in such a way as to deliver maximum benefit to consumers. The Utility Regulator could place all construction risks on the party responsible for constructing the pipeline, place them all on customers, or something in between.

Our preference would be to share risks between the company and customers such that the company takes those risks associated with pipeline construction that it is best placed to manage. We recognize that some of the risks associated with the construction of a transmission pipeline are outside the control of the license / contractor, e.g. some costs associated with archeology. In addition by allocating risk to the party best placed to manage that risk the overall risk profile of the project can be reduced, this should reduce project costs and will be to the benefit of gas consumers.

A complete transfer of risk onto companies is not free of charge and in return for taking on a greater level of risk the party will demand a risk premium from consumers. It should also be noted that if such risks are taken off companies completely then there is no incentive on the party responsible for constructing the pipeline to manage their costs effectively and this will result in increased costs for consumers.

When constructing the North West and South North pipelines the capital allowances to BGE (NI) were based on tendered construction rates and after materials had been purchased, in addition planning and archaeological works related costs were treated as cost pass through items. It would be useful for respondents to comment on whether this is an appropriate balance.

We anticipate that a similar principle will be used for distribution in that risks will be allocated to the party best placed to deal with them. However, the construction risks are lower for distribution.

Q4. We welcome views on the approach above to dealing with the construction risks associated with transmission. We would also welcome views on which risks should be shouldered by consumers and which companies are best placed to manage.

### ***Potential Distribution Network Business Models***

In Northern Ireland at present there are two distribution business models in operation. The first which is in operation in the Greater Belfast area, with the distribution network constructed in a spider web pattern in order that the maximum number of both domestic and industrial & commercial supply points subject to maintaining the distribution charge at a reasonable level.

The second, which is in operation in the Ten Towns area, with the distribution network constructed in the manner which most efficiently supports the connection of large industrial & commercial supply points, only those domestic supply points which are adjacent to the distribution network are targeted for connection.

#### Our initial view

The Utility Regulator does not favour any particular business model over others, however it is recognised that our duty to promote the development of the gas industry, which suggests maximising connections, must be balanced by our duty to develop the industry in an efficient and economic manner.

Q5. The Utility Regulator seeks respondent's views on how best the licence process could be designed to balance our statutory duties with reference to different business models.



## ***Incentive Mechanisms***

The regulatory model as set out in the distribution licence should be designed in such a way as to provide the distribution network owner with incentives to roll out an efficient and economic network to the maximum number of customers. We expect that this will be an area where companies will wish to compete and have set out some high level thinking below.

The incentive could be delivered through a:

- Development plan within the licence to supply certain areas and pass a certain number of properties;
- A volume incentive through a price cap regime;
- A connections incentive

The use of a development plan would be an effective mechanism at establishing the geographical pattern of the network at an early stage. A development plan would also ensure that the network was designed and constructed in a systematic and efficient manner. And that the network is constructed in a way that will facilitate the policy objectives of the project as a whole.

A volume incentive through a price cap regime would be similar to the regime that operates in the firmus energy / Ten Towns area. This provides a strong incentive for the licensee to bring forward connections to the largest supply points quickly so creating a stream of revenue as quickly as possible. However it might be argued that such a regime places a higher degree of risk on the licensee that does a revenue cap model and so would require a higher rate of return to attract investors.

A connections incentive operates in the Phoenix Natural Gas / Greater Belfast area. The objective is to connect the maximum number of supply points as possible so as to maximise and spread the economic benefits of connection to the natural gas network. However a balance must be struck between the number of connections and the level of distribution charges as connecting smaller supply points such as domestics is more costly per unit of gas consumption than is the case for larger consumers.

At present domestic consumers in Northern Ireland have free connections with the connection cost being recovered through ongoing distribution charges. However there

remains a substantial barrier in the form of conversion costs downstream of the meter, for example boiler replacement. As with the Green New Deal in Great Britain where the costs of internal energy efficiency measures are recovered over time through energy bills, it might be appropriate to recover certain conversion costs downstream of the meter through on-going distribution charges.

The appropriate incentive regime that a licensee should be subject to may change over time, so that a development plan and volume incentive might be most appropriate in the early stages as the network is being developed, but as the network becomes more mature a connections incentive may become the appropriate vehicle for delivering policy objectives.

#### Our initial view

Our current thinking is that the incentive should be designed so that licensee has an incentive to connect as many supply points as possible subject to the constraint that the level of distribution tariffs in the area of the network extension should be at a level which does not restrict the economic development of the natural gas network. We consider that they should give licensees freedom to innovate, and that penalties and rewards should as far as possible be applied only to outcomes within the licensee's control.

Q6. We would welcome any thoughts respondents may have on connections incentives and their importance as a mechanism to distinguish between the bids of potential licensees.

### ***User Commitment***

The Utility Regulator will need to consider what part user commitment could play in delivering the network extension project and what would be the appropriate form for this user commitment to take given the nature of supply points in the area of the network extension.

A binding form of user commitment would provide greater certainty for investors and this would lead to lower costs for consumers. As a significant number of the larger I&C loads in the network extension are either local or regional Government facilities then it would not be unreasonable to expect these bodies to commit to facilitating Government policy.

These commitments may take the form of a commitment to connect at a certain date and or to take no actions which would militate against connection at a future date such as the installation of new heating systems. We understand that DETI will investigate the potential for public sector loads to give a commitment in advance of the network being extended.

Q7. We would welcome any thoughts respondents may have on user commitment.

### ***Supply Exclusivity on the Distribution Networks***

We will need to consider whether supply exclusivity should be permitted in the area of the network extension on the basis that it may assist network development as this could be an area where companies will wish to compete and so will need to know our views. This issue will need to be considered in light of EU legislation.

Supply exclusivity has traditionally been the practice in Northern Ireland; in the Greater Belfast area Phoenix Natural Gas had the exclusive right to supply gas, while in the ten towns area Firmus Energy will continue to retain certain exclusivity rights until 2015.

The main argument is that exclusivity facilitates pricing flexibility for the distribution/supply entity in the early years as it encourages large industrial and commercial customers to connect.

However, the gas industry and retail competition are now well established in Northern Ireland and it is questionable whether the initial reasons for supply exclusivity still apply.

Q8. We would welcome views on the appropriateness of supply exclusivity

### ***How to capture innovative ideas and future proofing***

The Utility Regulator will need to consider how the new transmission and distribution assets could be developed in such a way as to minimise costs by taking into consideration innovative ideas on network development such as the use of distribution lines rather than transmission lines or the use of LNG tanks to store the

gas and from which a distribution network could be built. This would avoid the building of transmission lines. We would wish to ensure that if any operator is considering alternative forms of network development that these can be put forward for consideration during the bidding process and evaluated alongside more traditional models of network extension.

It may also be possible for the gas distribution network in particular to be designed in such a way as to facilitate future environmental technologies such as the use of biogas and or the use of Compressed Natural Gas for road transport.

Q9. We would welcome views on what alternative forms of network development may be considered to extend the gas network and how they could be factored into the design of the licence award process.

## 5. Design of the Award of Licence Process

This section considers a number of issues which will influence the design of the licence award process. These are:

- What the companies may compete on
- The sequencing of transmission and distribution licence award processes
- Scope of licences awarded

As above this section is presented on the assumption that more than one party will apply for a licence in any new licensed area. The more detailed licence mechanisms will need to be consistent with the Utility Regulator's overall policy on network price controls

The Utility Regulator wishes to design an award of licence process which facilitates participation by all the various ownership models open to licensees. The Utility Regulator would welcome comments on how the process could be designed so as to allow all models to participate and facilitate an appropriate balance of risk between consumers and the company to be licensed.

### ***What the companies may compete on***

The Utility Regulator will need to consider how the award of licence process can be designed in such a way that allows interested parties to be innovative and reflect their particular strengths but that is not so open that it militates against the development and application of an effective set of assessment criteria.

One option would be that the Utility Regulator could place no restriction on the range of possible regulatory models that interest parties might propose as part of their licence application. This gives maximum freedom for interested parties to be innovative in the design of a suitable business and regulatory model. This innovation may lead to additional services being offered to gas consumers and or the design of a gas network that offered for example environmental benefits such as the use of methane generated from anaerobic digestion or the provision of Compressed Natural Gas facilities for road transport. The difficulty with such an approach is that it may be very difficult to effectively

compare the offers made by the various interested parties. It is also not unreasonable to assume that regulatory models would be designed so as to maximize the potential benefits to the licensee rather than gas consumers

Alternatively the Utility Regulator could publish a suite of acceptable regulatory models and parameters from which interested parties could choose, to form a basis for their application. Alongside these the Utility Regulator would publish a set of assessment criteria so that interested parties could structure their applications accordingly. While interest parties will have less freedom to design a regulatory model this restriction maybe regarded as minimal given that there are possibly a limited range of viable models in any event. Indeed interested parties may welcome the steer that a list of options and assessment criteria may give them with regard to how they should compete. This approach could also allow the Utility Regulator to make more effective judgments between the various interested parties as they would be based on pre-determined assessment criteria. Generally this approach could sharpen the competitive pressures within the process and lead to better outcomes for consumers.

At the other extreme the Utility Regulator could publish a set of model licence conditions describing the desired regulator model. Interested parties would then compete on a limited range of parameters within the model. This option would give the Utility Regulator a high degree of certainty with regard to the range of potential outcomes and allow for a very clear set of assessment criteria to be set out prior to the award of licence process. This approach may limit innovation by interested parties which may mean they have to compete on a regulatory model that prevents them from maximizing the potential benefits to consumers based on their particular skills and experience.

#### Out Initial View

Our initial view is that the first option should be excluded on the basis that it offers so much freedom as to make the award of licence process liable to arbitrary decision making and or failing to maximize benefits to consumers. In making the choice between the other options it will be necessary for the Utility Regulator to balance the need to create a robust process against allowing innovation in the development of a regulatory model which delivers benefits to consumers

Q10. How fixed or flexible should the Regulator be in prescribing those factors that potential licensees should compete on?
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### **Pre-qualification stage**

At the beginning of the award of licence process the Utility Regulator anticipates that it will set out a set of assessment criteria against which potential licensees will be judged as a means of awarding licence on an objective basis. We set out below the broad areas that are likely to be covered by these assessment criteria. Respondents should consider whether or not the areas considered should be extended or reduced.

The Utility Regulator anticipates that there could be a pre-qualification stage that all applicants must pass as a minimum before their licence application can be judged. This pre-qualification will determine whether the applicant has access to the technical skills and resources to build and operate a natural gas network safely. In addition the applicant could have to demonstrate that they have access to the financial resources to fund the construction and operation of the networks over time on a stable basis.

### **Capital and Operational Expenditure**

This will be an important determinant of the costs to consumers of delivering the network extension project and it will be important that any licensee can deliver efficient costs. However as discussed above in section 4 accurate determination of these costs in advance may prove difficult given the lead times between the award of licence and actual construction beginning, and in the case of distribution networks the protracted period over which these costs will be incurred. However it will be important that cost efficiency is one criteria used in selecting any winner. The Utility Regulator will need to consider how these difficulties can be addressed and we could ask applicants to set out the cost structure they would propose to use for network.

### **Risk Sharing & Incentive Mechanism Parameters**

The Utility Regulator will need to consider which applicant offers the pattern of risk sharing between themselves and consumers which offers the best balance. Risks that may need to be shared include performance against volume/connection targets. It might be expected that applicants will wish to shift these risks onto consumers. This may not necessarily be to consumers disadvantage if it is reflected in a lower rate of return for investors.

The Utility Regulator will need to design a set of assessment criteria which balances all these considerations.

### **Rate of Return Required by Investors**

The rate of return required by investors should reflect the level of financial risk that investors are exposed to. The less risk investors are prepared to accept with regard to cost variations and the impact of incentive mechanisms then the lower should be the rate of return they receive. The Utility Regulator can therefore only judge the appropriate rate of return in conjunction with the level of risk sharing between investors and consumers.

Q11. We would be interested in views on the factors that companies might compete on for transmission and distribution and what other assessment criteria may be necessary for licence award

### ***The Sequencing of Distribution & Transmission Award of Licence Processes***

We will need to consider whether the award of licence process for transmission and distribution should occur in parallel or sequentially.

There is a significant delay, of up to three years, between a transmission asset being conceived and construction commencing. This delay is due to inter alia, detailed design work, resource mobilisation and receipt of planning consents. The lead times for the construction of distribution assets are considerably shorter. There is therefore an imperative to commence the transmission process as soon as possible in order to deliver the network extension project within the required time scales. Delaying distribution would also provide an opportunity to give greater consideration to the full range of potential regulatory models available at the level of distribution as the issues are more complex than those related to transmission assets.

On the other hand there may be synergies between transmission and distribution which could be captured if the distribution process is also started alongside the transmission process. For example, the opportunity to tender for transmission and distribution may be a more attractive scale of project for potential investors which could impact on the financing of the project. There may also be a benefit from the mutual certainty that the project would proceed if both the necessary award of licence processes were conducted



in parallel, given that a distribution network needs a transmission system and a transmission system needs a distribution network.

We want to encourage parties to propose innovative solutions to benefit consumers and the interaction between distribution and transmission could provide one avenue for this e.g. using distribution pipelines rather than transmission for some areas. Therefore we have an open mind as to how the process could be structured.

Q12. We would be interested in stakeholder views on whether the award of licence process for transmission and distribution should occur in parallel or sequentially.

### ***Physical Scope of the Gas Conveyance Licences***

The Utility Regulator will need to consider how the scale of the area of the network extension should be reflected in the number of licenses to be issued.

It should be noted that the scope of the transmission area will depend on decisions which will need to be taken on the best way to extend the network, taking account of the possibilities offered by compressed natural gas for example, or substituting transmission lines with distribution lines.

At distribution level however, there are a number of options for licence scope and these are considered below.

#### **Distribution option 1**

The Utility Regulator could award separate distribution licences for each of the six towns within the area of the network extension with separate licences for each leg of the transmission system needed to support these distribution networks.

This is the most dis-aggregated approach and given the small scale of each town and section of transmission system the duplication of effort with regard to the award of licence process and on-going regulation would be disproportionate. Very small scale network are also likely to be less attractive to investors restricting the number of potential interested parties. There are also likely to be increased costs for consumers due to dis-economies of scale and higher rates of return required by investors.

#### **Distribution Option 2**

The Utility Regulator could award a distribution licence which covered the entire area of the network extension.

This approach would be in line with existing regulatory practice in Northern Ireland at distribution level. The scale of such a license in terms of number of supply points and value of the asset base would also not be an order of magnitude different from existing distribution licences. This approach might therefore be regarded as offering the same risks and opportunities for both investors and gas consumers associated with the regulatory regime elsewhere in the Northern Ireland gas industry.

Our initial view is that the scale of network extension envisaged means that there should be a single distribution licence covering the entire area of the network extension.

<p>Q.13 We would be interested in stakeholder views on whether there should be a single distribution licence covering the entire area of the network extension.</p>
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We have not as yet discounted the option of awarding a single licence for the area of the network extension covering both distribution and transmission assets and this may provide an asset base more attractive to investors. However all distribution and transmission licences are split in NI and there is nothing stopping the same entity having both licences. We would be keen to hear views on whether a single distribution and transmission licence would have any benefit.

## 6. Policy on Extending Existing Networks

At present neither the Department of Enterprise Trade and Investment nor the Utility Regulator have a formal generic policy on extensions to existing gas distribution or transmission networks. In practice however the policy operated by the Utility Regulator has been to allow extension of the distribution networks where this might be described as economic. Related to this is the question of postalising tariffs – particularly at distribution level. These are issues that would require further consideration by DETI and the Utility Regulator.

The rest of this section sets out the current Utility Regulator practice with respect to distribution extensions, the options going forward and considers the question of postalising distribution tariffs.

### ***Distribution extensions current practice***

Should the holder of a distribution licence wish to extend their network into an area outside that which is designated in their licence they must apply to the Utility Regulator to have the area in the licence extended. The Utility Regulator in conjunction with the licensee then conducts a financial analysis of the proposed project. This analysis is based on a range of assumptions regarding capital and operating costs, connection rates and revenues, this revenue being calculated on the basis of the prevailing level of distribution tariffs. Only if the project has a positive Net Present Value will the Utility Regulator agree to amend the licence area. This approach prevents network extensions that would result in existing consumers paying higher distribution charges as a consequence of the network being extended. In the absence of such a policy distribution network owners might have an incentive to facilitate financially unviable extensions knowing that existing consumers would compensate them for any short-fall in revenue in the area of the extension.

It might be argued that this policy is overly restrictive and does not take account of, the benefits that consumers in the area of the network extension receive from gaining access to lower cost sources of fuel, and or the environmental benefits from greater penetration of a less carbon intensive fuel. If these wider economic benefits were included in the analysis of the projects more of them would pass the positive NPV test.

However the result would be that existing consumers would see their distribution tariffs rise as a result of what would previously have been deemed an ‘uneconomic’ connection.

However, within the current network areas there are customers who are more expensive to serve than others so there is a question of fairness as to why other customers who are currently outside that area are not allowed connect to gas. An argument could be made that as long as any extension did not lead to gas prices rising so much as to risk the competitiveness of gas as a fuel of choice, it should be considered.

### ***Options going forward***

There would appear to be a number of options going forward. We have not considered these in detail pending DETI’s further consideration.

1. Continue with the existing arrangements so that only economic network extensions are permitted, however it is recognized this will restrict the growth of the gas network in Northern Ireland.
2. Allow network extensions that are marginally uneconomic and whose connection would only have a small upward impact on the distribution tariffs of existing consumers. There would be the difficulty in determining an appropriate level of negative impact on existing consumers that was acceptable.
3. Require consumers in areas of network extension to make a financial contribution to the capital cost of the network such that the project NPV is no longer negative. While this approach would be consistent with economic theory, in that those who benefit from a project should pay for the project, it does mean that consumers in the area are giving up some of the benefit they receive from connection to the gas network which of course can reduce the level of penetration in the area of the extension. This impact would be exacerbated by a requirement to make a single up-front payment. An alternative would be on-going higher distribution charges in the area of the network extension, however this would increase complexity for gas suppliers increasing costs and restricting efficient market operation. An alternative would be to only require contributions from large industrial and commercial supply points, public buildings and public sector housing.
4. Government subvention to reflect the wider environmental and social benefits that result from connection to the gas network. This subvention would be paid to

the distribution network owner and set against the capital cost of the network extension such that the project had a positive NPV. This would be a government issue.

## ***Postalisation of tariffs***

### **Distribution**

The postalisation of distribution tariffs could have an impact on any extensions in significantly reducing risk for a developer. Currently there are two sets of different distribution tariffs in NI – one in Greater Belfast and one in the Ten Towns area. However the fact that consumers in Antrim pay one tariff but those in Lisburn a different one is arbitrary and based on who the distribution company is in each area. We are not aware of it coming about because of any policy decision. There is a question of cost reflectivity but tariffs within distribution network areas are postalised, as is the gas transmission network and the entire electricity network and the question of cost reflectivity would equally apply here. Also, if we allowed network extensions that are marginally uneconomic and whose connection would only have a small upward impact on the distribution tariffs of existing consumers, a town with the same economics could have a large impact on tariffs if it is to be included in one network area but not if it is to be included in another. This could lead to perverse outcomes which postalised distribution tariffs could deal with.

Postalisation of distribution tariff across Northern Ireland would reduce the financial risk of developing a new licensed distribution network, such as in Tyrone in Fermanagh, so reducing the rate of return demanded by investors and delivering lower costs for consumers. While more muted in the case of existing licensed distribution networks this reduction in cost of capital could also benefit consumers in the Greater Belfast and Ten Towns areas.

Postalisation of distribution tariffs may require legislation on the part of the Department of Enterprise Trade & Investment. In addition it would require change to the gas conveyance licences of both Phoenix and firmus. However given the experience gained from the creation of a postalised transmission tariff it is not considered that this would require either onerous or innovative modification of existing licences.

Postalisation of distribution tariffs would preclude the continuation of supply exclusivity with any distribution licenced area, however it should be noted that such arrangements will have been phased out in the existing areas by 2015

Postalisation of distribution tariffs would simplify the regulatory regime as it would reduce the number of different tariffs payable by gas suppliers and consumers with multiple sites in different distribution networks. This simplification would facilitate the development of a more co-ordinated retail gas market in Northern Ireland.

Postalisation could shift the additional costs of network extension projects with a negative NPV onto other gas consumers and so increase their distribution charges. It would however provide a larger base over which to spread excess costs and this might mean that network connection to smaller areas could have less impact on existing consumers.

### **Transmission**

It should be noted that the postalisation of transmission tariffs is a decision for the Department of Enterprise Trade and Investment and is related to the level of subvention, if any, that may be available for transmission.

If the new transmission assets are designated by the Department and become part of the Northern Ireland transmission asset postalisation regime, then the costs of owning and operating the new assets would be included in the calculation of the postalised tariff and the allowed revenue associated with the assets would be paid from the postalised pot.

This approach reflects the existing regulatory regime in Northern Ireland with transmission tariffs being postalised across Northern Ireland. The initial feasibility study indicated that in the absence of any subvention from the Northern Ireland Executive Committee, the inclusion of the new transmission assets in the calculation of the Northern Ireland postalised transmission tariff would increase the tariff by circa 15% and consequently retail gas prices would increase by circa 1-1.5%. Postalisation however reduces the level of risk faced by potential investors and so the risk premium required to attract the necessary level of investment. In addition the existence of a single transmission tariff across the Northern Ireland transmission system rather than a series of tariffs reduces complexity and therefore costs for market participants and facilitates the development of a coordinated market. Postalisation therefore has major benefits to consumers not only in the area of the network extension but across Northern Ireland.

## **7. Next steps**

We will hold a workshop to discuss the issues in this consultation during the week commencing 4 June but will confirm the exact date to industry stakeholders. Responses to this paper should be submitted by 27<sup>th</sup> June.

We will use the responses received to inform a further consultation on the design of the licence award process. This will take place when DETI's process is further advanced.

## Annex 1 Questions for respondents

	Question	Response
1.	We request that any developer interested in obtaining the necessary licences should indicate this in their response to the discussion.	
2.	We would welcome views on whether the principles set out in section 3 are appropriate.	
3.	We welcome views on how potential deviations between tendered and actual cost levels should be taken into account as part of the distribution award of licence process.	
4.	We welcome views on the approach in section 4 on dealing with the construction risks associated with transmission.  We would also welcome views on which risks should be shouldered by consumers and which companies are best placed to manage.	
5.	The Utility Regulator seeks respondents views on how best the licence process could be designed to balance our statutory duties with reference to different business models.	
6.	We would welcome any thoughts respondents may have on connections incentives and their importance as a mechanism to distinguish between the	



	bids of potential licensees.	
7.	We would welcome any thoughts respondents may have on user commitment.	
8.	We would welcome views on the appropriateness of supply exclusivity.	
9.	We would welcome views on what alternative forms of network development may be considered to extend the gas network and how they could be factored into the design of the licence award process.	
10.	How fixed or flexible should the Regulator be in prescribing those factors that potential licensees should compete on?	
11.	We would be interested in views on the factors that companies might compete on for transmission and distribution and what other assessment criteria may be necessary for licence award	
12.	We would be interested in stakeholder views on whether the award of licence process for transmission and distribution should occur in parallel or sequentially.	
13.	We would welcome views on whether there should be a single distribution licence covering the entire area of the network extension at distribution level.	

## Annex 2 Current Distribution Licence Areas

### Map of the PNG Area



## Map of the BGE Firmus Ten Towns Area

