



Commission for Energy Regulation

An Coimisiún um Rialáil Fuinnimh

Vision for the Proposed Safety Framework for the Natural Gas Market in Ireland

**A Discussion Document presented by the Commission for Energy
Regulation further to the publication of the draft legislation
concerning natural gas safety by the Department of
Communications, Marine and Natural Resources**

CER/04/355

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1. Background

The Commission for Energy Regulation (“the Commission”) assumed its responsibilities and functions for the regulation of the Irish onshore natural gas market under the Gas (Interim) (Regulation) Act, 2002 (“the Act”). Under the Act, the Commission and the Minister for Communications, Marine and Natural Resources are both required to have regard to the need to promote safety and efficiency on the part of natural gas undertakings.

To date, the regulatory framework for natural gas safety in Ireland has been successfully managed. However, as the market changes (through the introduction of competition with regard to the supply and transportation of gas), it is recognised that there is a clear need to revisit the framework and ensure that an appropriate regulatory regime is put in place for the new market structure.

Gas safety and its related regulatory framework was not specifically revised to any great extent in the Act due to time constraints in the preparation of the legislation. The Act therefore left existing structures in place while ensuring that the Commission’s duties specifically included reference to the promotion of gas safety and that all licensees had a clear responsibility to undertake their licensed activities in a way that protected public safety and the safety of the gas system.

It was considered that, because of the short timescale within which the Act needed to be put in place, the review and restructuring of the gas regulatory framework covering safety should be dealt with after the new regulatory legislation was enacted.

The Department for Communications, Marine and Natural Resources (“the Department”) has engaged with the Commission on the necessary revisions needed to the safety regulation framework in light of present and expected changes within the Irish gas market. The Department has prepared its consultation on the drafting of a Gas Safety Bill (“draft legislation”), proposed to address the regulatory framework for natural gas safety. This draft legislation is being published simultaneously with this document.

The Commission has been invited to present its vision for the regulation of natural gas safety which will inform the public of the proposed implementation of certain key aspects of the new regulatory framework as set out in the accompanying draft legislation.

2. Consultation on Commission's Vision

The Commission now invites comment on its high-level vision, as set out in this document.

Comments should be sent, preferably in electronic format, to Garrett Fitzgerald at the Commission. Comments are to be delivered to the Commission by no later than **5.00pm on Friday, 7th January 2005**. The contact details are:

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The Commission is planning to make these comments public and would encourage respondents to do the same. Any information that respondents wish to submit in confidence may be submitted separately, clearly marked as such. However, the Commission would prefer public comment wherever practicable.

NOTE: Department's Consultation on drafting of Gas Safety Bill

The Department's consultation is a separate, though complementary, consultation to this process on the Commission's vision for natural gas safety regulation. Comments on the specific legislation proposals should be addressed to the Department, through the details below. **Only comments on the vision, as set out in this paper, should be submitted to the Commission.**

Contact details for the Department:

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3. Introduction

The issue of gas safety regulation is becoming increasingly important, as the threshold for eligible customers is gradually lowered and full retail competition approaches (expected during 2005). Increasing numbers of market participants will need to know and understand their safety obligations within a new regulatory framework for the natural gas market.

This paper outlines the following:

- the Commission's objectives and responsibilities;
- requirements for a safety framework;
- risks associated with natural gas;
- requirement to change the current safety framework;
- proposals for a revised safety framework;
- interim measures; and
- next steps.

This paper sets out the main issues which require resolution regarding the role and responsibilities for gas safety and technical regulation of onshore natural gas activities in Ireland. Its preparation follows discussions between the Commission and the Department on these issues.

This paper is intended to examine the safety issues associated with the on-shore transportation and supply of natural gas, the present regulatory framework applied to natural gas safety and to present a high-level vision for a changed framework, together with proposed measures for dealing with safety and technical regulatory matters in the medium term.

It is important to note that this paper is being presented to complement the draft legislation published by the Department in order to provide clarity into the detailed implementation of the framework under the proposed legislation as presently drafted.

The Commission welcome any comments to be made on this document and the high-level vision presented herein. The Commission is committed to further consultation with all relevant parties on the detailed implementation of the framework and its powers/duties/functions arising out of any finalised and enacted legislation.

It is important to note that the views of the Commission, as expressed in this paper, are its preliminary proposals for the most appropriate implementation of a regulatory framework for Natural Gas Safety, envisioned in light of the key aspects of the proposed legislation. These views will be subject to extensive revision and refinement, arising out of this consultation and the finalisation of the legislation. The implementation of key aspects of any final framework will be subject to full consultation with all relevant parties.

4. Summary of Commission's Current Objectives and Responsibilities

The Act transferred to the Commission certain powers to act as the independent regulator for the natural gas industry. These functions and powers do not extend to upstream gas operations.

In enacting the legislation, the Government signalled its intention to introduce a new legal and regulatory framework for the gas industry with responsibility for the framework vested in the Commission for Energy Regulation. This new gas regulatory framework incorporates safety and technical issues but primarily concentrates on issues of economic regulation.

The Commission has a number of functions including advising the Minister on the development of the gas industry. In carrying out its duties, the Commission must also have regard to the need:

- To promote **competition** in the supply of natural gas;
- To promote **safety and efficiency** on the part of natural gas undertakings;
- To secure that there is **sufficient capacity** in the natural gas system to enable reasonable expectations of demand to be met; and,
- To secure the **continuity, security and quality of supply** of natural gas.

It should be noted that the Commission's current obligations (under Section 9(4)(d) of the Electricity Regulation Act 1999 (as amended)) to have regard, when carrying out its duties (under Section 9(3)), to the need to promote safety and efficiency on the part of gas (and electricity) undertakings is not an express function to ensure gas safety in its own right.

Whilst the Commission would not appear to have been allocated, as a function independent of its other functions, responsibility for the safety of the gas network, it is clear that the Commission is expected to satisfy itself with regard to the application of safety standards to the undertakings which it regulates. Since these undertakings include almost all of the key participants in the gas network (with perhaps the exception of appliance suppliers, installers and customers themselves), the Commission's functions and powers in relation to the regulation and administration indirectly confer on the Commission a supervisory role (and perhaps the single most coherent and comprehensive supervisory role) in relation to the safety of the gas network.

5. The Changing Environment within the Gas Market

To date, the integrated Bord Gáis Éireann ("BGÉ"), as the sole gas asset owner and operator in the Irish market, has been responsible for all aspects of safety with regard to natural gas pipelines and supply on-shore in Ireland. Under this regime, the most significant obligations placed upon Bord Gáis Éireann with regard to safety have been imposed through the Section 2(1) Orders under the Gas (Amendment) Act, 1987, conferring powers for the transmission, distribution and sale of natural gas within certain geographical areas and consents to construct and operate natural gas pipelines (or exemptions from same) as granted under Section 39A of the Gas Act 1976, as amended.

The introduction of competition to the gas sector results in new market participants having opportunities to become involved in both the ownership and operation of gas assets as well as the supply of gas to final customers. This

increase in gas market participants needs to be accompanied by the introduction of a safety and technical framework which will provide for the level of safety that is currently being attained and will be continued into the future by all gas market participants.

It is also the case that regulation with regard to gas installations needs to be reviewed and certain issues addressed. To date, the “Safety Assurance Scheme” operated by Bord Gáis Éireann has been adequate, but it is now recognised that there is a requirement to ensure that such issues as training, competence and registration of gas installers need to be brought under a legal framework.

The above issues, combined with the lack of any single legislative body being responsible for a precise, coherent and comprehensive structure of safety and regulatory functions, serve to emphasise the need for a revision of the present regulatory framework for gas safety.

6. Risks associated with the Transportation and Supply of Natural Gas

There are risks associated with natural gas that need to be managed and mitigated, these are summarised below:

6.1 Hazards that may be created by Natural Gas

Natural gas is made up of predominantly methane gas together with small quantities of various higher hydrocarbon gases and some inert gases including nitrogen and carbon dioxide. Mixtures of natural gas and air are usually flammable and, in some circumstances, can be explosive. Natural gas from Kinsale and the North Sea require the addition of an odorant to make the gas more readily detectable.

When burned, natural gas normally yields carbon dioxide and water. However if the supply of air is inadequate or there is a fault with the installation or maintenance of the appliance, the combustion process may be incomplete and carbon monoxide may be produced. Carbon monoxide is colourless, odourless and highly poisonous. There have been a number of serious incidents with respect to carbon monoxide poisonings in the recent past and this issue has been subject to a high profile public awareness campaign carried out by Bord Gáis Éireann and other parties.

Natural gas can escape from pipework, equipment and appliances within a property. Typical causes of such leaks include poor installation or inadequate maintenance of natural gas fittings.

External gas leaks from a variety of sources, including high and low pressure pipelines, mains and service pipes, etc, mean that gas can also find its way inside nearby buildings, creating the conditions for an explosion away from the source of the leak.

Gas detected within a property may be coming from inside or outside the building and requires a rapid response by a competent person. If a member of the public reports a gas escape to a market participant that is not responsible for responding to the escape (for example, in the instances where a report may be made to a gas supplier), then any misinformation or delay in redirecting the call to the organisation providing an emergency response can significantly increase the risk of a serious incident.

Supply interruption, whatever the cause, can result in low pressure of gas supply or intermittent supply of gas to properties. This produces a risk of gas/air mixtures in pipes and requires all effected properties to be made safe by physical isolation from the gas supply. If this happens on a large scale, then the re-commissioning process can take many days and require a large number of trained operatives.

Failure of pipelines, mains, service pipes or internal pipework to contain the gas may result in a dangerous situation for personnel in the vicinity due to the potential for an explosive gas/air mixture and/or for asphyxiation. This may arise from accidental damage, poor pipeline maintenance or work by unskilled workforce.

Fine particle contamination of natural gas may give rise to faulty appliance operation. The gas supply must therefore be maintained clean and free from dust and corrosion products arising from its production/transportation. If gas composition is outside predefined quality limits, then gas appliances may not combust the gas safely.

6.2 Mitigation of Principal Safety Risks

It is necessary that all gas licensees (i.e. Gas Transporters, Gas Shippers, Gas Suppliers, Gas Storage Operators) in addition to gas appliance suppliers, installers, etc, have a clearly defined role in the control of all risks associated with their own natural gas activities.

To mitigate the risks described above, there are four principal aspects of gas supply safety that need to be controlled, especially in an environment where the gas industry activities are undertaken by a number of market participants. These relate to:

- [1] the construction, maintenance and safe management of all network assets;
- [2] the control of gas pressure and flow within the network and the delivery of gas at the specified pressure, composition and quality at the end point;
- [3] the co-ordinated response of all market participants to gas emergencies;
- [4] ensuring the safe utilisation of gas downstream of the meter, within all gas facilities and premises (domestic and non-domestic).

The main risk mitigation measures required are outlined below, and the principal market participant responsible is shown in brackets.

Construction and Maintenance of Network Assets and Adequate Control of Gas Flow

- Gas composition entering and leaving the network must be maintained within acceptable limits¹ (*gas shipper*);
- Except for large industrial customers, all gas leaving the network must be odorised, within specified limits, to assist in the rapid identification of any gas escape (*gas transporter*);
- Gas network assets must be properly designed, constructed, maintained and modified (*gas transporter, gas storage operator*);

¹ In order to ensure safe system operation, natural gas must enter the network at a certain pressure which must be maintained. It is also necessary that the calorific value of the gas entering the system be within a certain range.

- Sufficient gas must be supplied to the network to meet daily demand (*gas shipper*);
- There must be sufficient gas within the network to maintain minimum levels of pressure at peak demands (*gas transporter*);
- Operators of connected gas networks must co-operate in their management and operation (*gas transporter, storage operator*).

Control and Response to Emergencies

- Where an emergency arises due to a gas escape or from a loss of gas supply to customers, there must be processes in place to safely manage the gas escape and the loss and re-establishment of gas supply. Market participants should have an obligation to provide information, co-operate and co-ordinate their resources, together with each participant having a clearly defined role and clearly defined responsibilities (*All gas market participants*);
- There must be knowledge of the vulnerable groups and provision made for their needs during emergencies (*gas transporter, gas supplier*);
- All gas leaks should be reported to a central point to avoid confusion and the co-ordinated response to gas escapes must have well defined standards of service (*gas transporter, gas supplier*);
- All market participants receiving misdirected reports of a gas leak must have adequate procedures and trained personnel available to gather detailed information, provide immediate safety advice and forward the report to the central emergency contact point (*All gas market participants*)

Safe Utilisation of Gas

- All gas appliances must be correctly installed and properly maintained (*gas appliance supplier, gas installer, gas customer*);
- All new gas installations must be tested and certified before being connected to a gas supply (*gas distributor, gas supplier*).

The provision of an overall framework for safety and technical controls within the future Irish gas market should, therefore, ensure that each market participant identifies the safety and technical risks associated with their activity and implements adequate and appropriate risk mitigation measures.

Those aspects concerning the control of the flow of gas and the response to emergencies will be addressed within the license conditions dealing with safety. Safety aspects concerned with issues within a gas customer's property are not subject to a license process and are currently outside the regulatory control of the Commission. However, the gas transporter is required under the Section 2(1) Order to mitigate against risks within properties and to refuse or cancel a new connection to any premises, or refuse to continue supply where supply is already existing, where it believes there to be an abnormal risk affecting safety associated with commencing or continuing supply to that premises.

7. Requirement to change the current Safety Framework

As stated in Section 4, currently the responsibility for safety lies largely with BGÉ (Distribution, Transmission and Supply), with the Commission having a role through its duties under the Act.

There are implications for the role of BGÉ within the gas sector due to the liberalisation of the market introducing new market participants. Consequently,

there may not be simply one body/organisation in control of the natural gas network and natural gas supply. This change will require all new participants to share responsibility for safety critical activities that are currently the sole responsibility of BGÉ. The main participants in the industry going forward will be:

- Gas Transporters (Transmission and Distribution);
- Storage Operators;
- Gas Suppliers;
- Gas Shippers;
- Gas Appliance Installers; and,
- Gas Appliance Suppliers.

Within the context of market reform, there is the clear potential for new or modified safety and technical responsibilities to emerge. Each of the market participant roles is now discussed.

Gas Transporters

The Act allows any party to construct a natural gas pipeline, subject to receipt of the necessary consent of the Commission under Section 39A of the Gas Act 1976 (as amended).

Under Section 16(1) of the Act, the operation of a distribution or transmission pipeline (other than an upstream pipeline²) is an activity that is licensable by the Commission. The Commission is considering the extent of separation to be imposed between distribution and transmission and it is intended that there will be separate transmission and distribution licences³. A transmission or distribution licence may apply to (1) a particular network or set of pipes, or (2) a particular geographic area. At the same time, there are the responsibilities laid down in Section 2 (1) Orders which give rights to parties to distribute and/or supply gas.

The Act allows any party to apply for a licence to operate a transmission or distribution pipeline. This requirement will also apply to all existing pipelines. At the same time, there are a number of towns located close to, but not yet connected to, the existing gas transmission system that may require distribution networks to access natural gas. The legislation provides for the construction of new transmission or distribution assets or the purchase of existing assets by bodies other than BGÉ.

It is critical that all gas transporters maintain, at a minimum, the same level of gas safety in the design, integrity and management of their assets that is currently being achieved in Ireland. Additionally, mechanisms need to be put in place to ensure that gas transporters have a duty to respond and to co-ordinate their actions during a gas supply emergency to ensure the emergency is managed efficiently and safely with minimum disruption to gas supplies.

Under the restructured market, there may be other parties operating distribution networks. Making the first response to gas escapes, whether internal or external to property, is a time critical process and to avoid confusion,

² Upstream Pipeline as defined in the Act.

³ The natural gas licences for Transportation (Transmission and Distribution) and Supply (including Shipping) were published by the Commission in 2004 (CER reference 04/220, 04/221 and 04/236).

the responsibility for providing the emergency response is best provided by a single organisation.

Operators of high pressure transmission pipelines in Ireland work according to well established codes (currently, BGE Transmission is the only operator and owner of transmission lines in Ireland). These codes require that plant be designed, built, maintained and operated in a manner that provides high levels of reliability and maintains the current low levels of risk to society. Pipelines are subjected to continuous monitoring and surveillance to control and minimise risk.

Modern distribution networks are built using fusion welded polyethylene pipe. This material is flexible and tough and does not corrode. The safety record of this pipe material is excellent. Prospective new transporters operating in Ireland would be expected to construct their networks using materials deemed to be in compliance with the relevant standards

The responsibility of ensuring that a new connection is safe and that there are no undue risks associated with connecting or continuing a gas supply connection will remain an obligation upon any licensed distributor. Proposals with regard to risk mitigation, in the context of regulating gas appliance installers, are discussed in the next section (under “Gas Installer Certification Body”).

A reducing proportion of BGE’s older pipeline assets are constructed in various metallic materials, including some grades of cast iron. These materials require a higher level of maintenance to ensure proper control of risk. BGE are engaged in a programme for the replacement of cast-iron mains, the objective of which is to eliminate all cast-iron mains from the natural gas network

Gas Storage Operators

The storage of gas is a separate licensable activity under the Act. Different elements of the storage service may be regulated, and storage licence conditions may overlap with the conditions in transmission and distribution licences.

Currently, there is no licensed storage facility in Ireland. However, the Commission anticipates that there will be the potential for commercial storage facilities to be made available to the market. Gas storage operators need to be subject to similar safety disciplines to gas transporters with regard to the design and integrity of their assets and interfacing with other market participants in gas supply emergencies.

Gas Suppliers

The Act confers on the Commission the power to grant licences for the supply of gas to parties eligible for Third Party Access to transmission and distribution pipelines. Licensed suppliers will also be able to sell gas to other suppliers and, in principle, can also export gas. Gas suppliers will arrange the delivery of gas to eligible customers.

Non-eligible customers will continue to receive gas from BGE (Energy Supply Unit) or from any other holder of a Supply Order under Section 2(1) of the Gas (Amendment) Act, 1987, as amended. Upon full market opening (due by 2007 at the latest), all classes of consumer will be eligible to choose their gas supplier.

It is critical that all gas suppliers continue to fulfil their responsibility for safety. While emergency responses will be provided by a designated gas transporter, mechanisms need to be put in place that ensure that gas suppliers and gas storage operators manage and mitigate the safety risks in their business including:

- keeping customers informed of emergency numbers and procedures in the event of a gas emergency;
- managing customer interruptions in an emergency (including provision for vulnerable groups);
- responding to reports of a gas escape (provision of initial safety advice, re-directing calls, notifying emergency response service provider, etc.); and,
- full co-operation with all market participants in a gas supply emergency.

Gas Shippers

Gas shippers enter into agreements with gas transporters for the transport of gas through the pipeline network. As the threshold for contestability is reduced, it is likely more parties will choose to participate in the market as shippers. Most are likely also to be gas suppliers, (though often just supplying their own premises such as power stations).

The risks inherent in shipper activities are addressed by ensuring that gas is input into the Transmission Network at the correct composition and that supply matches demand on a daily basis. These risks are generally controlled by compliance with the BGE Code of Operations.

Shippers will also be required to fully participate and co-ordinate with other market participants in a gas supply emergency.

Gas Appliance Installers

Presently, there is no regulatory legislation explicitly covering the installation of gas fittings and appliances within premises (in this context, specifically domestic and light industrial and commercial premises). There is no explicit legislative backing to require all fittings, installations and maintenance work on gas appliances to be conducted by a certified and competent installer.

Although there is a “Safety Assurance Scheme” in operation by BGE, it is the opinion of the Commission that it must become a requirement for all work on gas fittings to be carried out by a suitably competent person. This current lack of a requirement for all work on gas installations to be carried out by suitably qualified installers means that the regulation of natural gas safety is not adequately comprehensive to mitigate against risks from poorly installed fittings beyond the meter.

In addition, in the interim, it may be appropriate for the “Safety Assurance Scheme” to be reviewed in light of the opening up of the market to new participants.

8. Proposals for Safety and Technical Framework

Changes to the existing safety framework are proposed in order to control and mitigate the safety risks that arise as a consequence of extending competition in the Irish Gas Market to all consumers.

Any new arrangements should be at least as safe as the current position and should provide a basis for improvements in safety standards.

As previously described, it is suggested that the responsibility for safety in the gas industry rests with those who create and have control over the risks. The degree of statutory control should be the minimum needed to establish effective and comprehensive control of risk and maintain the confidence of the public at large. The regulation of natural gas safety should be an explicit function of the body within which responsibility for it resides, together with that body being granted the appropriate powers to carry out this function.

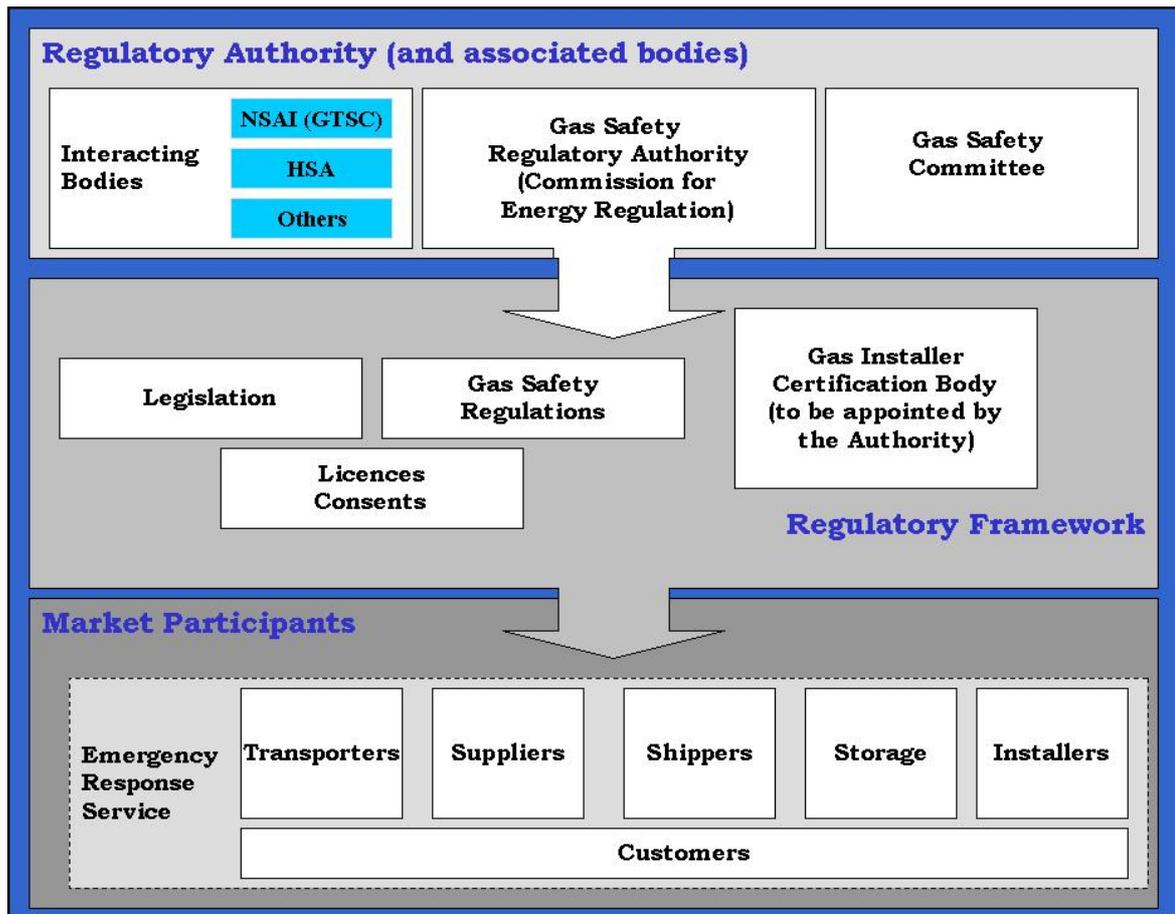
Below are the Commission's high level proposals with regard to the framework for the regulation of gas safety, set out in the context of the draft legislation presented with this vision paper:

- The explicit function for regulation of natural gas safety is made the responsibility of an appropriate authority. It is proposed that the Commission will assume this function. This is discussed further in Section 9;
- The Commission would liaise with the Gas Technical Standards Committee and National Gas Safety Committee in discharging its duties;
- In addition to having responsibility for the promotion of safety, the Commission would be responsible for the establishment and delivery of the gas safety regulatory framework. This is discussed further in Section 10;
- The Commission would discharge its duties through the establishment of a gas safety regulations regime together with the licensing of market participants for supply of gas and operation of network assets, the consenting of gas pipelines and the imposition of any appropriate measures. This is discussed further in Section 10;
- In addition, the Commission would be responsible for the appointment and monitoring of a body with responsibility for the certification of gas installations and the development of a framework for the assessment, training and certification of competence of the installers. This is discussed further in Section 10;

Under the above proposals, the Commission would therefore have responsibility for the regulation of gas safety through its ability to set regulations and would authorise the construction and operation of network assets, licence natural gas activities and appoint a body with responsibility for the certification scheme for gas installers (similar to the present "Safety Assurance Scheme").

The establishment of the Commission as the natural gas safety regulator will require enabling legislation granting it appropriate powers and authority (including powers to sanction market participants). The draft legislation, as presented by the Department in its consultation, is considered to provide the requisite powers in this respect.

The diagram on the next page provides an illustration of the proposed framework.



The key elements of this proposed framework which would be enabled by the draft legislation are discussed in greater detail in the next sections.

9. Proposals for Regulatory Responsibility (Regulatory Authority and associated bodies)

It is proposed that the overall responsibility for the regulation of natural gas safety would reside within one authority which would be supported by other parties/bodies as appropriate. The role of the Gas Safety Regulatory Authority is discussed below and that of some of the other bodies with whom it would interact.



Gas Safety Regulatory Authority (The Commission)

As stated previously, although the present safety regulatory framework has operated well to date, there is a need to revise this framework (and in particular, the regulatory role) in order to provide for the explicit functions of gas safety regulation and allow those functions to reside within one single authority. The

Authority assuming this role will have clearly defined responsibilities with regard to the promotion and regulation of (on-shore) natural gas safety in Ireland and will have conferred on it all the necessary powers with regard to the making of regulations/orders together with powers to monitor and sanction market participants, as it deems appropriate.

In accordance with the draft legislation, it is proposed that the Commission will be the authority to assume the function of gas safety regulation, given that it already has substantial responsibility and expertise in this area. In addition, the costs of implementing this alternative would be considerably less than the establishment of another independent body.

The Commission's role in this regard would clearly need to be underpinned by legislation, such as that proposed, providing it with the explicit functions and powers to carry out its duties.

In addition to the Gas Technical Standards Committee and the Gas Safety Committee, in the discharge of its duties with respect to natural gas safety, the Commission would interact with other parties as appropriate (for example, the Health and Safety Authority). The Commission will also appoint and regulate a body to carry out the function of certifying natural gas installers and this particular role is discussed in Section 10 of this document.

Draft Legislation – Gas Safety Regulatory Authority

Head 6 of the draft legislation provides for the Commission to assume the function to regulate the activities of natural gas undertakings and installers with respect to safety and to secure the promotion of safety so that natural gas customers and the public are safe with regard to the licensed activities of natural gas undertakings. The Head provides for the establishment and implementation of a natural gas safety regulatory framework by the Commission following consultation with the Minister and specifies the areas to be addressed under the framework.

Interacting Bodies

It is the opinion of the Commission that the expertise for the review of existing, and introduction of new, standards should reside with the body most appropriately equipped to define such standards. Given the role of the National Standard Authority of Ireland and their Gas Technical Standards Committee ("GTSC") to date, it is proposed that this duty would continue to reside with this body which is charged with a statutory duty with respect to standards.

The Commission would interact with the GTSC as appropriate, and vice-versa, to ensure that standards are appropriate (GTSC) and enforced (Commission).

In addition to the GTSC and the Gas Safety Committee (see below), in the discharge of its duties with respect to natural gas safety, the Commission would interact with other parties as appropriate (for example, the Health and Safety Authority). The Commission will also appoint and regulate a body to carry out the function of certifying natural gas installers and this particular role is discussed in Section 10 of this document.

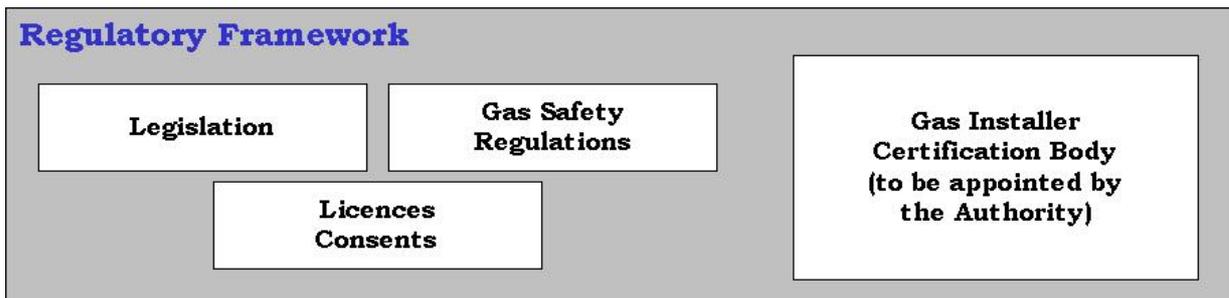
Gas Safety Committee

The Committee, already established by the Commission and described further in Section 13, is responsible for the review of all safety related aspects of natural gas activities, with a particular emphasis placed on the review of reports into natural gas safety incidents and the implementation of recommendations arising out of such reviews. It may be the case that recommendations by the Committee would go some way in informing the work of the Commission, in regulating natural gas activities, and the GTSC, in developing and revising standards.

10. Proposals for Regulatory Tools (Regulatory Framework)

Under the new framework, the Commission envisages that it would have the necessary powers and functions to carry out its role as the regulator for natural gas safety. This would include having the appropriate powers concerning the licensing of natural gas activities, consenting the construction and operation of pipelines, the making of regulations regarding the activities of market participants and the appointment of a body to carry out the function of certifying natural gas installers.

It is envisaged that the regime relating to the licensing of natural gas activities and the consenting of natural gas pipelines would continue as is. These and other aspects of the Commission’s proposals are discussed below.



Legislation

Clearly, all legislation relating to natural gas safety will establish the overall framework for natural gas safety. Such legislation, such as that proposed by the Department, will provide for the appropriate powers being granted to the Commission in the carrying out of its duties in addition to prohibiting certain activities (unlicensed operation/construction of natural gas assets, installation/maintenance of gas fittings by unregistered installers, etc.).

Gas Safety Regulations

It is proposed to introduce a regulatory regime based around “Gas Safety Regulations”. These would seek to mitigate the risks that arise as a consequence of extending competition in gas supply to all customers. The introduction of Gas Safety Regulations (which have been introduced in other jurisdictions when competition in gas supply has been extended to domestic customers) will provide the authority that has responsibility with the legal enforcement to ensure continued safe operation of the gas market.

The Gas Safety Regulations will be designed to make each market participant responsible and accountable for managing and mitigating their own safety risks, and will require all market participants to coordinate their resources for gas supply emergencies.

Such regulations would require new legislation for enactment and the draft legislation provides for this. In the meantime, and in the absence of these regulations, the Commission included a comprehensive set of conditions in its licences (for Transmission, Distribution and Supply/Shipping) which address a number of the necessary safety issues.

Draft Legislation – Gas Safety Regulations

Head 6 provides for the Commission to establish and implement its gas safety regulatory framework through the making of regulations and directions to natural gas undertakings and natural gas installers, to the extent that it considers necessary.

Support for Gas Safety Regulations

The Gas Safety Regulations will need to be supported through the following:

- The ‘Gas Safety Regulations’ need to be underpinned by existing Irish Standards that set out the technical requirements for the safe design, construction, maintenance and modification of the natural gas infrastructure (including downstream of the meter);
- These existing standards will need to be reviewed on an on-going basis to identify any enhancements or updates required to ensure that all the safety issues are adequately addressed;
- Provision in the licences for market participants to be compliant with the new Regulations, thereby enabling the potential sanctions for non-compliance with ‘Gas Safety Regulations’ to include the withdrawal of a licence;
- A gas industry safety forum to co-ordinate strategic safety matters.

Gas Licences and Consents

The licences, for gas Transmission, gas Distribution and gas Supply/Shipping, were finalised after extensive consultation with the industry and are effective for the relevant parts of BGÉ as well as for other market participants carrying on licensed activity.

The Commission has included in these licences what it believes are the necessary conditions for safe operation of the gas industry. The conditions relating to safety have been drafted in such a way as to facilitate any eventual safety framework which will be finalised once the necessary legislation is enacted.

The Gas Safety Regulations and Natural Gas Licences would include provision for licensed gas market participants to demonstrate their competent management of the safety risks associated with their activities by the submission and acceptance of a Safety Framework to the Commission for its approval.

The Safety Framework is a document produced by the market participant to demonstrate their competence in the safe design and construction of the assets that they will provide and their safe operation, or the safe management of the other services that the market participant may provide.

This has already been provided for under the Safety provisions contained in the Supply/Shipping, Transmission and Distribution Licences (refer to Appendix 1 for the relevant extracts from the licences).

Safety Framework – Transportation Licensees

In the case of Gas Transporters (Transmission or Distribution), the relevant Safety Framework would demonstrate their competence in the safe design, construction and operation of their gas network, and would include the following detail requirements:

- Specification of gas network including design, control and maintenance;
- Description of the complete operation of the gas network;
- Planning and organisation of gas supply;
- Safe systems of control, including gas pressure;
- Gas composition and odourisation;
- Provision of network balancing services on daily basis;
- Risk assessments and method statements and safe systems of work;
- Safety management systems;
- Co-operation with other relevant market participants;
- Provision of emergency services;
- Arrangements for control of gas supply emergencies;
- Management of gas escapes;
- Provision for investigation and reporting of incidents.

The Gas Transporter's Safety Framework will also encompass many of the technical requirements of the Section 39A Consent to Construct pipelines process. The pipeline operator/asset owner would be required to include asset management plans to demonstrate the long term integrity of the asset, including the avoidance of any measures producing a short term financial saving, at the cost of a long term expenditure legacy.

Safety Framework – Gas Supply/Shipping Licensees

Gas Suppliers and Gas Shippers, under their licences, are required to demonstrate their competent management of all safety risks associated with their gas supply and shipping activities. This would also be achieved by the submission and acceptance of an acceptable Safety Case.

The Safety Framework is required to set out the Supplier's/Shipper's criteria, systems and procedures for ensuring that, in so far as applicable to them in carrying out the licensed activity/business, they apply the practices applied by, and achieve the standards achieved by, a prudent natural gas undertaking. This will include the following:

- the organisation, reporting and other arrangements relating to the deployment of staff, and the standards of qualification and competence to be applied to their recruitment and training;
- the composition and quality of natural gas supplied, so as to ensure these are maintained within safe limits;

- the assessment of risk and of appropriate measures to reduce such risk in relation to natural gas activities;
- the drawing up, implementation and compliance with any applicable codes of operations, codes of practice and standards with which their licence requires compliance.

Gas Installations and Gas Installer Certification Body

There is a need for the installation and maintenance of all natural gas fittings to be regulated in order to ensure that all work is carried out in accordance with the relevant standards by competent persons. It is therefore the Commission's opinion that, under the new legislation, it should be made an offence for anyone other than a competent installer to carry out work on gas fittings. The competency of the person must be established by an independent body.

BGE presently operate the "Safety Assurance Scheme" which is a listing system for competent gas installers, reflecting the current requirements of the legislation and standards in place. The programme, which assures the safety of new installations carried out by both "listed" and "non-listed" installers has ensured a good safety record in the sector.

However, to ensure continued improvements in the operation of the programme and to prepare industry for impending change, it is proposed that an independent registration body ("the Registration Body") be established. It would fulfil the following requirements:

- To operate the registration of installers in an independent and transparent manner;
To operate and monitor a safety assurance programme with gas distributors;
- To further strengthen the current safety procedures applied to meeting safety obligations and to facilitate increasing significantly the number of installers participating;
- To assure an ordered transition of the current installer base into the new market environment.

In addition to the above, this Body would be available to the Commission to carry out incident investigations and reports, where deemed appropriate.

The Registration Body would also be best placed to advise upon and operate appropriate public information campaigns relating to the safe installation and utilisation of gas.

The establishment of this Registration Body will need to be supported by enabling legislation, such as that drafted, which should provide for the following:

- nominating and giving legal status to a Registration Body for the certification of natural gas installers;
- establish, as its statutory responsibilities gas installer registration and the operation of a safety system for all installations;
- the Registration Body should be nominated by the Commission for such matters;
- the Registration Body should report annually and on specific non-routine events/incidents to the Commission; and,

- the Registration Body should be further subject to periodic independent reviews initiated by the Commission in order to assess and report on the discharging by the Registration Body of its statutory duties.

Draft Legislation – Gas Certification/Registration Body

Head 7 of the draft legislation provides that only competent (“certified”) natural gas installers may carry out work on natural gas fittings and that such work will conform with the relevant national and EU gas safety and installation standards. Failure to comply with this requirement is an offence under the draft legislation.

Furthermore, Head 6 provides for the appointment, by the Commission, of a single body for the establishment of a system for the regulation, training, certification and on-going assessment of the competence of natural gas installers and the procedures for the investigation of complaints regarding the competence of named natural gas installers.

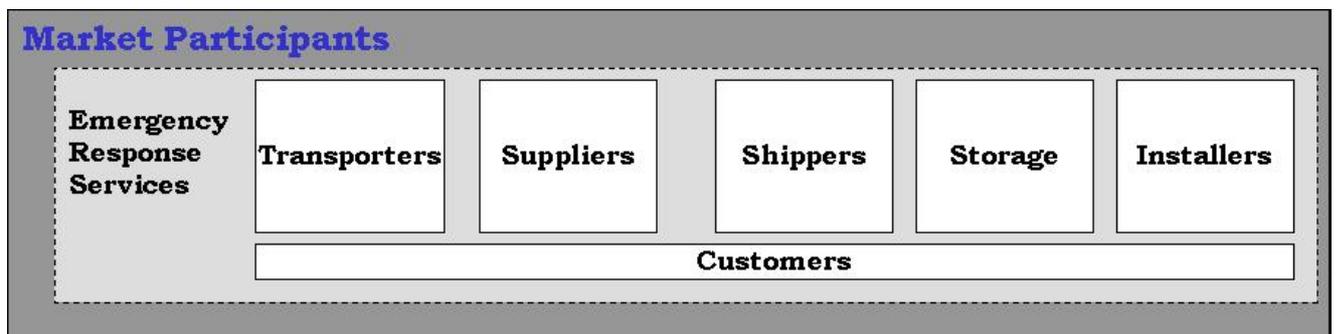
Other Aspects of the Supporting Framework

- A single body, BGĚ (Distribution), will continue to be responsible for providing an emergency response to all reported gas escapes, whether from inside or outside a property, and for making the site safe at the location of each gas escape. A single national gas emergency telephone number should be provided. All market participants to provide immediate and appropriate response to any misdirected report of a gas escape that they may receive (to immediately redirect the call to the national gas emergency telephone number);
- All market participants to co-ordinate their resources to manage gas supply emergencies including any divergence from gas quality limits. This will involve establishing a number of nationally recognised stages of an emergency ranging from a local gas supply incident through to national gas supply interruptions. The duties of market participants in each stage will be clearly established to ensure an escalating emergency can be managed in a co-ordinated manner;
- Duties will be placed on all market participants to co-ordinate with BGĚ (Transmission and Distribution) in managing gas supply emergencies. Each market participant will need to produce ‘Emergency Procedures’ as part of their Safety Case that sets out their roles and responsibilities in each stage of supply emergency;
- Gas supply to a premises will not be commenced or continued in instances where the Distributor believes there to be an unacceptable risk in the commencement or continuation of that supply. This currently forms the basis for the BGE “Safety Assurance Scheme” which is expected to continue until new provisions, such as those proposed under the draft legislation, are imposed.

11. Market Participants

The overall objective for the revised regulatory framework is to ensure the protection of life and property by ensuring that all activities with respect to gas are carried out in an appropriate manner which takes account of, and mitigates against the risks associated with the transportation, supply and use of natural gas.

To that end, the Commission, together with the other relevant bodies, will impose through its regulatory tools (such as legislation, regulations, licences, consents, and, through, the intermediary body which will be the Gas Installer Registration Body, the certification of gas installers and installations) the appropriate standards and ensure that the various market participants are behaving in an appropriate manner to mitigate against risks relating to the safe transportation, supply and use of natural gas.



It is the Commission's opinion that the regime will place appropriate obligations on all market participants and customers, through the application of the regulatory tools as described in the previous section.

12. Conclusion on Proposed Regulatory Regime

The draft legislation provides that "It shall be the function of the Commission to regulate the activities of natural gas undertakings and natural gas installers with respect to safety and to secure the promotion of safety so that natural gas customers and the public are safe with regard to the licensed activities of natural gas undertakings".

The Commission has now presented its proposals as its high-level view of how a revised regulatory regime for natural gas safety, as would be enabled by the draft legislation, would operate. The objective of this regime, being consistent with the function envisaged under the draft legislation, would be to capture all of the activities which are exposed to safety risks within a regulatory framework in order to provide for:

- the safe construction and operation of transportation assets;
- the safe supply of natural gas;
- the safe installation and maintenance of natural gas fittings;
- the safe utilisation of natural gas; and,
- appropriate methods to manage, contain and respond to gas safety risks, incidents and emergencies.

The Commission believes the high-level proposals as set out in the preceding sections to be adequately comprehensive to achieve the above objective.

13. Suggested Interim Measures

The introduction of the Gas (Interim) (Regulation) Act, 2002 transferred certain functions to the Commission. Although the longer term safety framework is discussed in this document, there are aspects where interim action by the Commission is appropriate.

Licence Conditions and Statutory Instruments

It is proposed that, in the interim, the relevant provisions of the licenses and statutory instruments (Section 2 (1) Orders) remain effective and are fully implemented to assist in ensuring the continued safe maintenance and operation of the gas infrastructure.

These include general obligations for:

- BGÉ Distribution to continue to provide emergency response to gas escapes inside and outside customers premises and to any other relevant safety related concerns (such as incidents involving Carbon Monoxide produced from the combustion of natural gas);
- BGÉ Distribution to continue their policy of only connecting gas to premises in which all natural gas appliances have been installed by accredited gas fitters;
- BGÉ Distribution continue to have the rights of entry and to cut off gas supplies if considered unsafe;
- BGÉ continue to provide reports on safety, and to investigate and report on serious incidents to the Commission. BGÉ shall also be obliged to co-operate fully with any independent investigator appointed by the Commission;
- BGÉ required to provide its Transmission and Distribution System Standards engineering standards to the Commission for its agreement. BGÉ is then obliged to comply with these standards and are required to make a statement on their compliance annually to the Commission and be subject to audit from the Commission.
- Gas Suppliers to ensure they have trained staff, appropriate systems and procedures in place to provide for misdirected calls to the supplier, relating to a natural gas escape, to be routed to BGÉ Distribution;
- Any new gas market participant maintains the appropriate level of risk mitigation.

Reportable Incidents

The Commission is now the agency that receives notification of reportable incidents (as specified under the Section 2(1) Orders for distribution).

The Commission, under its responsibilities arising out of the Act, has appointed a Natural Gas Safety Committee comprising representatives of the Commission, BGÉ and representatives of other appropriate parties. The Committee considers matters related to safety including:

- Reportable incidents;
- Odourisation;
- Unaccounted for gas;
- Replacement of cast iron mains or lead service pipe issues.
- Public safety information, gas safety campaigns, etc;

The Terms of Reference for the Committee are provided in Appendix 2.

Responsibility downstream of the meter

Under the Section 2(1) Orders for distribution, BGÉ are currently required not to provide a connection or the continuation of a connection where they are of the opinion that this would give rise to an abnormal risk. No changes are envisaged to this provision in the immediate term and the same requirements/obligations would be applied to any new market participant. This, or equivalent obligations, will be applied under the new legislative framework.

Gas Technical Standards Committee (GTSC)

This body, operating under the National Standards Authority of Ireland, oversees the development and harmonisation of Irish Standards. It is envisaged that this role would continue under the revised regulatory framework.

14. Next Steps

The Commission now invites comment on the key proposals of the high-level vision as set out in this paper.

Specific aspects of its proposals, on which the Commission invites comment, are:

- the appropriateness of the proposed new functions of the Commission with respect to the regulation of natural gas safety;
- the scope of the Commission's responsibilities and authority with respect to the natural gas market in the context of safety;
- the overall comprehensiveness of the Commission's proposals and any areas which need to be addressed with respect to safety and which may not be detailed in the Commission's proposals;
- the use, appropriateness and comprehensiveness of the regulatory tools proposed under the new regime;
- the requirement for all installation and maintenance work with respect to natural gas fittings to be carried out by certified installers;
- the role of the proposed Gas Installer Certification Body;
- the role of the Natural Gas Safety Committee;

The Commission is committed to full consultation through-out the process of finalising any new regulatory framework for natural gas safety and it is important to note that this paper is intended to set out only the Commission's high-level proposals for such a framework.

Once the legislation is finalised, the Commission will be in a position to finalise its vision, taking due account of revisions to the legislation and comments arising out of this consultation.

The implementation of the key aspects of any finalised framework (for example, the appointment, functions, licensing and funding of a body to carry out the certification of natural gas installers) will be subject to consultation with industry and relevant bodies on the part of the Commission.

The draft legislation is also out for consultation at this time and comments on the specific provisions proposed in that should be addressed to the Department in accordance with its consultation process (see Section 2 of this document for further details).

APPENDIX 1 – Safety Frameworks required under the Natural Gas Licences

Supply/Shipping Licence

Condition 6: Safety Framework

1. Without prejudice to the obligations of the Licensee under or pursuant to any relevant safety requirement, the Licensee shall, at a time decided by the Commission after this licence has come into force, produce and thereafter maintain, in a form approved by the Commission, a document to be known as the Safety Framework.
2. The Safety Framework shall set out the Licensee's criteria, systems and procedures for ensuring that, so far as applicable to the Licensee in carrying out the Supply Business the Licensee applies the practices applied by, and achieves the standards achieved by, a prudent natural gas undertaking, including without limitation in respect of:
 - (a) the organisation, reporting and other arrangements relating to the deployment of staff, and the standards of qualification and competence to be applied to their recruitment and training;
 - (b) the composition and quality of natural gas supplied, so as to ensure these are maintained within safe limits;
 - (c) the assessment of risk and of appropriate measures to reduce such risk in relation to natural gas activities;
 - (d) the drawing up, implementation and compliance with any applicable codes of operations, codes of practice and standards with which this licence requires compliance; and
 - (e) compliance with:
 - (i) the conditions or provisions of any Section 2(1) order made in respect of the Licensee and any consent granted, or direction given to, the Licensee under or pursuant to natural gas legislation;
 - (ii) the Licensee's obligations and duties under this licence; and
 - (iii) relevant safety requirements.
3. The Licensee's obligations under this Condition shall include, without limitation, the application and observance of all relevant and applicable practices and standards, whether deriving from the recommendations or

requirements of a relevant authority or from best practice in the natural gas industry.

4. Once in the first twelve month period after the date of issue of this licence and at any other time on direction from the Commission, the Licensee shall procure, on terms of reference approved by the Commission, the services of an independent consultant suitably qualified in natural gas safety matters as approved by the Commission to examine and report on the Licensee's compliance with the Safety Framework, such report to be concluded within a time period specified by the Commission and provided to the Commission at the same time as it is provided to the Licensee.

5. In this Condition:

“relevant authority”

means an authority designated by the Commission for the purposes of this Condition and notified to the Licensee by the Commission.

Transmission Licence

Condition 14: Safety Framework

1. Without prejudice to the obligations of the Licensee under or pursuant to any relevant safety requirement, the Licensee shall, at a time decided by the Commission after this licence has come into force, produce and thereafter maintain, in a form approved by the Commission, a document to be known as the Safety Framework.
2. The Safety Framework shall set out the Licensee's criteria, systems and procedures for ensuring that, so far as applicable to the Licensee in carrying out the Distribution Business the Licensee applies the practices applied by, and achieves the standards achieved by, a prudent natural gas undertaking, including without limitation in respect of:

- (a) the design, installation, testing, commissioning, inspection, maintenance, repair, decommissioning and removal of all pipelines and ancillary equipment of the Licensee forming part of any transmission or distribution system (if any);
- (b) the organisation, reporting and other arrangements relating to the deployment of staff, and the standards of qualification and competence to be applied to their recruitment and training;
- (c) the condition of any equipment by means of which gas is consumed by final customers to the extent that the Licensee is required by law to ascertain it;
- (d) the composition and quality of natural gas transported and supplied, so as to ensure these are maintained within safe limits;
- (e) emergency procedures by which the Licensee will manage any emergency on its distribution system, including procedures for co-ordination with the Network Emergency Manager, other natural gas undertakings and the Commission;
- (f) the assessment of risk and of appropriate measures to reduce such risk in relation to natural gas activities;
- (g) the drawing up, implementation and compliance with any applicable codes of operations, codes of practice and standards with which this licence requires compliance, and any internal rules and procedures for the operation of the Licensee's equipment connected to or forming part of any transmission or distribution system (if any);
- (h) the making of agreements relating to connection to, and use of, the Licensee's transmission or distribution system (if any); and
- (i) compliance with:
 - (i) the conditions or provisions of any Section 2(1) order made in respect of the Licensee and any consent granted, or direction given to, the Licensee under or pursuant to natural gas legislation;

- (ii) the Licensee’s obligations and duties under this licence; and
 - (iii) relevant safety requirements.
- 3. The Licensee’s obligations under this Condition shall include, without limitation, the application and observance of all relevant and applicable practices and standards, whether deriving from the recommendations or requirements of a relevant authority or from best practice in the natural gas industry.
- 4. Within twelve months of the date of issue of the licence and thereafter at such time as the Commission may direct, the Licensee shall procure, on terms of reference approved by the Commission, the services of an independent consultant suitably qualified in natural gas safety matters as approved by the Commission to examine and report on the Licensee’s compliance with the Safety Framework, such report to be concluded within a time period specified by the Commission and provided to the Commission at the same time as it is provided to the Licensee.
- 5. In this Condition:
“relevant authority” means an authority designated by the Commission for the purposes of this Condition and notified to the Licensee by the Commission.

Distribution Licence

Condition 14: Safety Framework

1. Without prejudice to the obligations of the Licensee under or pursuant to any relevant safety requirement, the Licensee shall, at a time decided by the Commission after this licence has come into force, produce and thereafter maintain, in a form approved by the Commission, a document to be known as the Safety Framework.
2. The Safety Framework shall set out the Licensee's criteria, systems and procedures for ensuring that, so far as applicable to the Licensee in carrying out the Transmission Business the Licensee applies the practices applied by, and achieves the standards achieved by, a prudent natural gas undertaking, including without limitation in respect of:
 - (a) the design, installation, testing, commissioning, inspection, maintenance, repair, decommissioning and removal of all pipelines and ancillary equipment of the Licensee forming part of any transmission or distribution system (if any);
 - (b) the organisation, reporting and other arrangements relating to the deployment of staff, and the standards of qualification and competence to be applied to their recruitment and training;
 - (c) the condition of any equipment by means of which gas is consumed by final customers to the extent that the Licensee is required by law to ascertain it;
 - (d) the composition and quality of natural gas transported and supplied, so as to ensure these are maintained within safe limits;
 - (e) emergency procedures by which the Licensee will manage any emergency on its transmission system, including procedures for co-ordination with the Network Emergency Manager, other natural gas undertakings and the Commission;
 - (f) the assessment of risk and of appropriate measures to reduce such risk in relation to natural gas activities;
 - (g) the drawing up, implementation and compliance with any applicable codes of operations, codes of practice and standards with which this licence requires compliance, and any internal rules and procedures for the operation of the Licensee's equipment connected

to or forming part of any transmission or distribution system (if any);

(h) the making of agreements relating to connection to, and use of, the Licensee's transmission or distribution system (if any); and

(i) compliance with:

(i) the conditions or provisions of any Section 2(1) order made in respect of the Licensee and any consent granted, or direction given to, the Licensee under or pursuant to natural gas legislation;

(ii) the Licensee's obligations and duties under this licence; and

(iii) relevant safety requirements.

3. The Licensee's obligations under this Condition shall include, without limitation, the application and observance of all relevant and applicable practices and standards, whether deriving from the recommendations or requirements of a relevant authority or from best practice in the natural gas industry.

4. Within twelve months of the date of issue of the licence and thereafter at such time as the Commission may direct, the Licensee shall procure, on terms of reference approved by the Commission, the services of an independent consultant suitably qualified in natural gas safety matters as approved by the Commission to examine and report on the Licensee's compliance with the Safety Framework, such report to be concluded within a time period specified by the Commission and provided to the Commission at the same time as it is provided to the Licensee.

5. In this Condition:

“relevant authority”

means an authority designated by the Commission for the purposes of this Condition and notified to the Licensee by the Commission.

APPENDIX 2 – Terms of Reference of Natural Gas Safety Committee

1. **Mission** To Protect life, to prevent injury, to minimise economic loss by means of a pro-active, precautionary and preventative approach to ensuring the safe transmission, distribution and use of natural gas.
2. **The Committee** The Gas Safety Committee shall have up to [seven] members appointed by the Energy Regulator who are knowledgeable concerning gas safety issues and representative of the organisations and authorities responsible for the transmission, distribution and use of natural gas. The Chairman shall be appointed from amongst the members by the Energy Regulator for a period of up to one year. The Chairman may have his appointment renewed at the discretion of the Energy Regulator.
3. **Meetings** The Gas Safety Committee shall determine the frequency and location of meetings. Such meetings will usually take place in Ireland with a quarterly frequency. However the Energy Regulator may summon a meeting of the Committee at any time at his discretion.
4. **Agenda, Reports** The Chairman shall circulate meeting agenda to the membership and the Energy Regulator ten days ahead of the meeting date. Committee members may propose items for the agenda up to five days ahead of a meeting.

The minutes of each meeting will be circulated to members and to the Energy Regulator within two weeks of the adjournment of the meeting. An Annual Report will also be submitted by the Committee to the Energy Regulator.

5. Activities and Responsibilities of Committee

The activities and responsibilities of the Committee centre on:

- the transmission of gas
- the distribution of gas
- the end use of gas

5.1 Transmission of Gas

The main safety concern involving gas transmission relate to the danger of explosions and the cascading economic consequences arising from loss of gas supply:

- third party damage to high pressure pipelines

- corrosion of pipework arising from loss of or damage to corrosion protection systems.
- security and safety of compressor station, gas reception stations, pressure reduction stations, block valve stations and other A.G.I's associated with the transmission of gas.

In this area the Gas Safety Committee would monitor:

- the nature, content and frequency of transmission pipeline inspections
- the data and findings obtained from these inspections
- the frequency and results of emergency exercises undertaken to test responses to emergency situations
- the effectiveness of leak detection systems
- the gas detection and explosion prevention hardware and procedures at AGIs
- any incidents that cause a pipeline section or an AGI or element of an AGI to be shut down or closed in response to an emergency
- emergency communication systems and system testing
- repairs to transmission pipelines and infrastructure

The Gas Safety Committee would, where appropriate and relevant, make safety recommendations to the gas transmission company, the GTSC, and/or the Energy Regulator and follow up on these recommendations over subsequent Committee meetings.

5.2 The Distribution of Gas

The main safety concerns involving gas distribution relate to the danger of leaks from distribution pipework and gas service pipelines leading to explosions and the consequences of these explosions:

- third party damage to pipework
- ground movement resulting in damage to pipework
- corrosion of pipework
- unsafe installation or repair of pipework
- damage to pipework by fire not due to gas
- unsatisfactory response to report of gas leak
- unsatisfactory investigation of gas leak
- unsatisfactory classification of gas leak

In this area the Gas Safety Committee would monitor:

- unaccounted for gas
- public reported escapes
- gas leak monitoring campaigns
- frequency and characteristics of mains fractures
- mains and services replacement programmes

- special measures in neighbourhood of multi-storey buildings, schools, hospitals and such like
- all incidents involving gas escapes that led to explosions, fires or evacuations
- gas odourisation
- mains conditioning
- safety advice campaigns (TV, radio, newspapers, flyers with gas bills etc)

The Gas Safety Committee would, where appropriate and relevant, make safety recommendations to the gas distribution companies, the GTSC, and/or the Energy Regulator and follow up on these recommendations over subsequent Committee meetings.

5.3 The Use of Gas

The main safety concerns involving gas use in homes and commercial premises relate to situations leading to the inadequate combustion of gas and the potential for carbon monoxide poisoning.

There is however still the danger of explosions arising from leaks in the internal pipework and from forgetfulness where an appliance is turned on and the user becomes distracted.

- inadequately vented equipment
- restriction of air supply
- by-passing of safety cut-out devices by untrained installers or repairmen
- poorly installed or untested internal pipework
- poorly installed or untested appliance
- meter tampering or by-passing

In this area the Gas Safety Committee would monitor:

- all incidents leading to carbon monoxide poisoning or hospital admissions
- all incidents where gas leaks cause fires, explosions, or evacuations
- gas installer training and certification procedures
- response procedures relating to gas leak reports (numbers on call, location, communications and technical support, leak investigation methodology)
- numbers and nature of internal reported leaks
- equipment safety trends (flame failure devices, low oxygen monitors, carbon monoxide monitors etc.)
- publicity material concerning gas use safety
- health authority initiatives concerning carbon monoxide poisoning
- relevant Coroners reports
- relevant gas accident reports

The Gas Safety Committee would, where appropriate and relevant, make safety recommendations to the gas distribution companies,

marketers of gas appliances, the GTSC, and/or the Energy Regulator and follow up on these recommendations over subsequent Committee meetings.

5.4 International Aspects

The Gas Safety Committee should be represented at the following international meetings:

- The Annual Meeting of the Interconnector Commission to discuss the results of the annual inspection of the two sub-sea interconnectors and plan the work of subsequent inspections.
- The Annual Meeting of the European Pipeline Authorities.

The Gas Safety Committee would also endeavour to obtain information on major gas incidents overseas that may be of relevance to Ireland.