

# Operational Review 2011



## What we do

We are the independent operator of the natural gas transportation system in Ireland. We ensure the system is operated, maintained and developed in a safe and efficient manner.





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## Chairman's Report



I have the pleasure of presenting the fourth Gaslink Operational Review to you.

Gaslink's role is to make a significant impact on the development of the overall gas market in Ireland. In order to do this, Gaslink aims to provide gas network services to customers efficiently, safely and without discrimination using an approach that is independent, participative and far sighted.



## Key achievements in 2011

- Gaslink worked with Endesa Ireland to progress the gas connection to the new power generating station at Great Island, Wexford. Endesa Ireland signed a large network connection agreement in 2011. Following this a planning application was lodged for the construction of the pipeline.
- The introduction of a single European Gas Market was advanced, with Gaslink representing Ireland at a European level.
- Four new towns were connected to the gas network – Tipperary Town, Cahir, Kinsale and Kells.
- Gaslink introduced a virtual reverse flow service at Moffat in co-operation with National Grid and Moffat shippers (a shipper is any person that holds a shipping licence to transport natural gas through the transportation system). This service, which facilitates commercial arrangements for the flow of natural gas from Ireland to Great Britain, was approved by the Commission for Energy Regulation (CER) in Ireland and the Office of the Gas and Electricity Markets (OFGEM) in the UK.
- Gaslink presented its views on Irish Energy Policy to the International Energy Agency (IEA) as part of an EU/IMF/IEA review.
- In 2011, Gaslink continued to work with the Corrib Gas Partners in preparation for the arrival of Corrib gas into the network. The indigenous supply provided by Corrib will play a significant role in enhancing Ireland's energy security.

## Third Gas Package

In December 2011, the Statutory Instrument which transposes the European Union's Third Gas Package into Irish Law and implements the Independent Transmission System Operator (ITO) in Ireland was issued by the Minister for Communications, Energy and Natural Resources.

The development of the ITO as an independent subsidiary of Bord Gáis Éireann (BGÉ) would involve the integration of Gaslink into the new ITO business.

On 22 February 2012, the Minister for Public Expenditure and Reform announced the Government's intention to proceed with the sale of Bord Gáis Energy, subject to the completion of a full due diligence process and to market conditions.

The Minister also announced the intention to retain the ownership of the Bord Gáis network in State hands. Gaslink continues to work with the wider Bord Gáis Éireann group on implementing the unbundled structure for the networks business as required by the Third Gas Package.

Gaslink is working with BGÉ to ensure that it continues to fulfill its system operation responsibilities until such time as unbundling is complete, while at the same time ensuring that the transition to the new arrangements is as smooth as possible and the impact on market participants is minimised.

Gaslink will continue to operate Ireland's gas transmission system, ensuring that there is a constant efficient service for the operation, maintenance and development of the gas transportation system until such time as Bord Gáis Éireann is fully compliant with the Third Gas Package.

# Chairman's Report *continued*

## Gaslink in Europe

In addition to the ITO restructuring requirements outlined above, the Third Gas Package provides for the harmonisation of gas transportation arrangements throughout Europe and includes the introduction of a pan-European network code. This development brings its own challenges and opportunities for the gas industry in Europe. In order to ensure that Gaslink best represents Irish gas interests in Europe, two staff members from Gaslink were seconded to work full-time as members of the European Network for Transmission System Operators for Gas (ENTSO-G) team based in Brussels. These employees will continue their work in Europe during 2012.

## The Future for Gaslink

Gaslink is now facing uncertain times; there are many changes to both the gas industry and the wider landscape in Ireland. Ireland is experiencing one of the most severe financial recessions in its history. The gas industry, along with all other sectors, has felt the impact of this recession with a number of significant projects being deferred or cancelled.

Gaslink strives to identify ways to assist shippers and customers alike, while minimising risks to the general transportation systems. This role will continue in 2012.

## Acknowledgements

Firstly, I would like to take this opportunity to welcome Aidan O'Sullivan to the Board of Directors. I would like to thank my fellow Directors and the Company Secretary for their support and commitment during the year. I would also like to thank the Department of Communications, Energy and Natural Resources and the office of the Commission for Energy Regulation for their ongoing support and advice. Finally, my thanks to our General Manager, Aidan O'Sullivan, his management team and all the staff at Gaslink for their excellent work, strong contributions and support throughout the year.



**Brendan Fehily**  
Chairman, Gaslink





Gaslink strives to identify ways to assist shippers and customers alike, while minimising risks to the general transportation system. This role will continue in 2012.



## General Manager's Report



2011 was a busy and productive year for Gaslink.

### Market Overview

54,762 GWh of natural gas was transported through the network in 2011, a decrease of approximately 12% on 2010. The decrease in total gas transported from 2010 to 2011 can be partially attributed to mild weather conditions and reduced power generation gas demand. Demand continues to be dominated by the power generation sector accounting for approximately 64% of all gas transported and natural gas was the fuel used to generate 55% of electricity in Ireland in 2011.





## European Developments

It is vital that Irish market arrangements and interests are given strong representation by Gaslink at European level.

As Ireland is located at the periphery of the European transmission network, central European policies and developments may not always be appropriate for the Irish market. As such, it is vital that Irish market arrangements and interests are given strong representation by Gaslink at a European level.

The objectives of the EU's Third Gas Package are to progress the liberalisation of gas markets across Europe and to facilitate the development of a single European gas market. Guidelines and codes for the implementation of the Third Gas Directive are currently being developed to achieve this goal.

The Third Gas Package provided for the establishment of two new European-wide organisations. One for regulators called the Agency for the Co-operation of Energy Regulators (ACER) and one for gas system operators called the European Network for Transmission System Operators for Gas (ENTSOG).

ACER's key functions are to oversee and improve cross-border regulatory co-operation for gas transmission between member states and to oversee ENTSOG in its preparation of common European network codes. Ireland's Commission for Energy Regulation (CER) is a member of ACER.

One of ENTSOG's objectives is the development of a range of pan-European network codes. A network code will define the rules regarding the transportation of natural gas on the European gas transmission system. Gaslink is a member of ENTSOG and is actively involved in ENTSOG's various working groups, ensuring the needs of the Irish gas market are represented at a European level. In participating in the development of the network codes, Gaslink makes strong representations to advance Irish gas interests. Two Gaslink employees are currently seconded to work full-time as members of the ENTSOG team in Brussels and these employees will continue their work in 2012.

## New Entry Points

Gaslink continued to work with the Corrib Gas Partners to prepare for the arrival of Corrib gas into the network.

2011 was a significant year for the Corrib gas project. All regulatory permits and consents associated with the onshore pipeline part of the project were issued and construction on this final phase commenced. Work on the onshore pipeline includes the building of a 4.9km tunnel under Sruwaddacon Bay in North Mayo, a project that is expected to take at least two years.

## Connection to New Gas Fired Power Generation

Gaslink and Endesa Ireland entered into a Large Network Connection Agreement for the gas connection to supply Endesa's Combined Cycle Gas Turbine (CCGT) at Great Island, Co. Wexford. Bord Gáis Networks lodged a planning application with An Bord Pleanála for construction of the pipeline and also completed the tendering process for the line pipe order. Construction of the pipeline will commence in 2012 subject to receiving all the necessary regulatory and statutory approvals.

## New Towns

The connection of Kinsale, Tipperary Town, Cahir and Kells to the natural gas network was completed. These towns were deemed economically viable for connection to the natural gas network under the 'New Towns Study' announced by Gaslink in 2010.

## Single European Gas Market

Since the Statutory Instrument (S.I. 630 2011) was issued by the Minister for Communication, Energy and Natural Resources in December 2011, Gaslink has continued to work with the wider Bord Gáis group on implementing the unbundled structure for the networks business as required by the EU Third Gas Package.

Gaslink is working with Bord Gáis to ensure it continues to fulfil its system operation responsibilities until unbundling is complete, while at the same time ensuring that the transition to the new arrangements is as smooth as possible and the impact on market participants is minimised.

Gaslink will continue to operate Ireland's gas transmission system, ensuring that there is a constant efficient service for the operation, maintenance and development of the gas transportation system until such time as Bord Gáis Éireann is fully compliant with the Third Gas Package.

# General Manager's Report *continued*

## Retail and Wholesale Gas Market Developments

Competition was further enhanced during 2011 with the entry of another new shipper into the Irish domestic gas market and with another gas supplier entering the pre-payment metering market.

Currently there are four shippers operating in the Irish domestic market; Airtricity, Bord Gáis Energy, ESB Electric Ireland and Flogas, and two shippers operating in the pre-payment metering market; Airtricity and Bord Gáis Energy.

109,000 domestic customers switched providers during 2011.

A number of initiatives were designed or implemented during 2011 to tackle some of the effects of today's challenging economic climate including Debt Flagging, Pay before Locking, Pre-Payment Metering and Smart Metering.

## All-Island Gas Market

Gaslink and Bord Gáis Networks are involved in the establishment of an All-Island gas market. Gaslink leads the Code of Operations work stream and participates in all other work streams.

Gaslink has worked closely with the regulatory authorities and the gas industry in both jurisdictions to progress the All-Island gas market.

Infringement notices have been issued by the European Commission (EC) to both the Republic of Ireland (ROI) and Northern Ireland (NI) as Member States with respect to violations of Regulation EC 1775/2005.<sup>1</sup>

Effective and non-discriminatory access by third parties to the gas transmission networks is an essential condition for the existence of a genuine internal gas market. With the aim of ensuring a minimum level of harmonisation, Regulation (EC) No 1775/2005 therefore lays down the basic principles.

In 2011, the regulatory authorities in both jurisdictions directed that efforts should be concentrated on addressing the EU infringements. The infringements relate specifically to;

1. Failure to make maximum capacity available at the point where gas enters the Irish network from the UK network (i.e. the Moffat Entry Point).
2. Failure to declare a Relevant Point at the point of interconnection between the Irish and Northern Irish networks on the South North Pipeline (SNP).

Gaslink is currently working towards addressing the Republic of Ireland infringements.

## International Energy Agency

In September 2011, Gaslink and Bord Gáis Networks delivered a presentation to the International Energy Agency (IEA) as part of an EU/IMF/IEA review outlining the Gaslink/Bord Gáis Networks view on Irish energy policy.

In this presentation Bord Gáis Networks and Gaslink highlighted the critical role of gas in the Irish economy, noting gas will play an even greater role in the global energy mix and that Irish energy policy should reflect this.

Gaslink's view is that future energy policy should be based on a strategy which combines natural gas with renewables. Gas is an ideal partner to wind energy and other renewables as it provides the ideal back-up to counteract the intermittent nature of renewables, particularly wind. This means gas can support the diversity policy of the European Commission by providing the required resilience and security of supply that should be central to any revision of Irish energy policy.

Gaslink's view is that future energy policy should be based on a strategy which combines natural gas with renewables.

<sup>1</sup>REGULATION (EC) No 1775/2005 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 28 September 2005 on conditions for access to the natural gas transmission networks.



*Pictured (from left): Ann-Marie Colbert, Advisor, ENTSOG (seconded from Gaslink); Stephan Kamphues, President, ENTSOG; Günther Oettinger, EU Commissioner; Aidan O'Sullivan, General Manager, Gaslink; Noel Regan, Advisor, ENTSOG (seconded from Gaslink).*

## Transmission Development

In July 2011 Gaslink published the Network Development Statement (NDS), covering the ten year period from 2010/11 to 2019/20. This document was previously referred to as the Transmission Development Statement (TDS) and was renamed to reflect all aspects of the natural gas system, not just the Transmission System. The NDS provides an overview of future demand, likely sources of supply and the capacity of the system to meet demand.

In addition, the Joint Gas Capacity Statement, which Gaslink assisted in the development of, analyses and reviews gas supply and demand on the transmission system for both Ireland and Northern Ireland for the next ten years.

## Governance

Our Directors have overall responsibility for the direction, stewardship and governance of Gaslink in compliance with best practice and all applicable legislation. Gaslink adopts all industry best practice standards in its approach to risk management and governance.

## Outlook

2012 will see a transformation of the natural gas market in Ireland with the progression of the EU Third Gas Package.

The construction of the pipeline for the Corrib gas is a welcome development. The indigenous supply provided by Corrib will play a significant role in enhancing Ireland's energy security. Construction of the pipeline to Endesa's proposed power generation station in Wexford is also planned in 2012.

The move towards a single European gas market will continue in 2012.

## Acknowledgements

The work and dedication of our staff and management was never more evident than in 2011. In a very demanding and challenging year, they continued their hard work and I would like to take this opportunity to thank them for their commitment in a time of significant change. I would also like to thank our customers for their continuing support and contribution in the development of the Irish natural gas market. Finally, I would like to thank my Chairman, Brendan Fehily, my Company Secretary Liam O Riordan, and my fellow Directors for all their commitment during the year.

**Aidan O'Sullivan**  
General Manager, Gaslink

## Board of Director's Profile



*Brendan Fehily* Chairman



*Aidan O'Sullivan*



*Denis Cronin*



*Douglas Kelleher*



*Will Roche*



*Liam O'Riordan* Company Secretary



Brendan Fehily

**Chairman**

Brendan Fehily was appointed Chairman of Gaslink in June 2009. He is a consulting engineer with a wealth of experience in the management of multidisciplinary projects. He has held a number of senior positions during his career. He is a former Chairman of Fehily Timoney & Co., where previous to this he was a senior partner. Mr. Fehily has worked in a variety of organisations namely M. C. O'Sullivan Consulting Engineers, H.N. Walsh & Partners Consulting Engineers, Cork County Council, John A. Wood Ltd and J. Murphy & Sons Ltd, Contractors.

Aidan O'Sullivan

Aidan has been the General Manager of Gaslink since its establishment in 2007 and was appointed to the Board of Directors in April 2011.

In his role as General Manager of Gaslink, Aidan plays a key role in the development of an All-Island gas market and is centrally involved in Europe in the development of a single European gas market, where he represents Ireland's gas interests at a European level.

Aidan, a graduate of UCC, has 32 years senior management experience in the Irish gas industry. Aidan was responsible for the procurement of natural gas supplies and sales to power generators and large industrial customers and the development of storage agreements at the Kinsale Head gas field. In the 1990's he developed the Gas Procurement Function for Bord Gáis and managed its transition into a large energy trading business unit responsible for the procurement of both gas and electricity.

Denis Cronin

Denis Cronin is a Fellow of the Chartered Institute of Personnel and Development and holds a Higher Diploma in Industrial Engineering. Working initially as a Training Advisor for a number of years with FÁS, he subsequently developed his career in HR management, primarily in the IT sector working with multinational companies. With over twenty years of HR management experience, he joined Bord Gáis in 2006 as Head of HR and in 2007 took the added responsibility of becoming the first Chairman of Gaslink until June 2009.

Douglas Kelleher

Douglas Kelleher was appointed to the Board in June 2009. An engineer, he is currently Chairman of North Side Glass. Prior to this Douglas was M.D. of PRP Ireland and held a number of senior positions with Bourns Electronics Ireland and Flocord Ireland. He is a member of a number of other Boards including the Regional Executive of IBEC and he is Chairman of the South Cork Enterprise Board.

Will Roche

Will Roche was appointed to the Board of Gaslink in October 2010. He is Group Director of Strategy and Regulation and his current responsibilities include managing Group level regulatory affairs within Bord Gáis. Over a 30 year career at Bord Gáis, Will has held roles that included Corporate Economist, Head of Market Research and Corporate Planning Manager. He has been deeply involved in the Bord Gáis approach to market liberalisation from the outset and is currently working on the Group's response to the EU's Third Energy Package in Ireland, Northern Ireland and Great Britain. He holds a BComm degree from UCC, specialising in finance, strategy and economics.

Liam O'Riordan

**Company Secretary**

Liam O'Riordan was one of the founding Directors of Gaslink and retired from the Board in June 2009. He has been Company Secretary of Gaslink since its incorporation in 2007. He joined Bord Gáis in 2000 where he held a senior management position and was appointed Company Secretary in November 2007. He holds a professional accounting qualification and trained with Ernst & Young in Cork where he held a number of senior positions.



# Management Team Profile



**Aidan O'Sullivan** General Manager



**Tim O'Brien** Regulatory Affairs Manager



**Liam Hearne** Technical Manager



**Avian Egan** Framework Development Manager



**Celine Hayes** Manager of Transportation Projects





The Gaslink Management Team is led by Aidan O'Sullivan, General Manager (profile details on page 11)

### Tim O'Brien

#### **Regulatory Affairs Manager**

Tim joined Gaslink in 2007 and holds a BSc in Financial Economics and an MBA. Tim's responsibilities include regulatory affairs, licence compliance and risk management within Gaslink. Prior to joining Gaslink, Tim worked for the CER where he was responsible for the commercial aspects of the gas and electricity network regulation. Prior to this he worked for a number of well-known organisations in the UK including The Inland Revenue, the Serious Fraud Office, and a number of organisations in the financial services sector.

### Liam Hearne

#### **Technical Manager**

Liam joined Gaslink in 2007 and is a graduate of Engineering from UCC. Liam is Gaslink's representative on technical-related industry committees both at a national and European level. He is responsible for Ireland's Natural Gas Emergency Plan. Liam has over 30 years' experience in the natural gas industry, encompassing pipeline stress analysis; project management; distribution operations; design of transmission pipelines and above ground installations; materials specification; pipeline integrity and safety.

### Avian Egan

#### **Framework Development Manager**

Avian joined Gaslink in 2007, having joined Bord Gáis in 2003. Avian is a graduate of the University of Limerick and holds a Bachelor of Technology and post graduate Project Management qualifications. Avian's responsibilities include development of the contractual framework with industry in both the Wholesale and Retail sectors. On behalf of Gaslink she is active in the development of European Gas Market Arrangements in particular within the European Network of Transmission System Operators for Gas (ENTSOG) and European Network Code Development Groups. Avian previously worked in management positions within LogicaCMG, Microsoft and ALPS Electric Ireland.

### Celine Hayes

#### **Manager of Transportation Projects**

Celine joined Gaslink in 2007. She is a graduate of University College Dublin and holds a Bachelor of Engineering and Master of Management Science degrees. Celine has nine years' experience in the gas industry and previously worked as a project manager within management consultancy and software development organisations.

## 1. Gaslink's Role in Ireland

Gaslink commenced operations in July 2008 as a result of developments in European energy policy, which aims to liberalise the gas market across Europe and promote an open and competitive market. It holds the licence for the gas transmission and distribution network system operator in Ireland, managing and operating the natural gas network. It is the Independent System Operator (ISO) of the natural gas system and ensures that the system is operated, maintained and developed in a safe and efficient manner.





## Gaslink is responsible for developing and maintaining the strategy for the Irish natural gas retail market.

Natural gas plays a significant role in Ireland's energy mix, offering a lower cost alternative to other fossil fuels and providing the most efficient form of fuel in heat and electricity generation. The substitution of gas for coal and oil is also becoming more prevalent for environmental reasons as emissions of greenhouse gases and many other pollutants are reduced. The versatility of natural gas is such that it also has substantial potential as a fuel for transport.

Gaslink is responsible for facilitating competition and participation in the market; for creating and developing the contractual framework with industry to flow gas within Ireland and for negotiating all associated legal contracts; for facilitating all new connections and the development of arrangements and rules to ensure a fair market for all; for the safety of the network and for extending the gas network across the country.

Gaslink, in conjunction with the relevant regulatory authority and industry stakeholders, is responsible for developing and maintaining the strategy for the Irish natural gas retail market. It is responsible for establishing market rules, supporting initiatives from various industry bodies and for supporting compliance with EU legislation; as well as playing a critical role in the development of an All-Island gas market. Gaslink co-ordinates industry meetings at both wholesale and retail levels on an All-Island basis. There are currently 18 companies who are licensed to ship gas through the gas transportation system and Gaslink manages these contracts.

An independent subsidiary of Bord Gáis Éireann, Gaslink has its own Board of Directors. However, Gaslink does not own the natural gas transportation system and much of the day-to-day work carried out in respect of the operation and maintenance of the transportation system is carried out under contract by Bord Gáis Networks on behalf of Gaslink.

The main stakeholders in the Irish natural gas market are:

- The Department of Communications, Energy and Natural Resources (DCENR)
- The Commission for Energy Regulation (CER)
- Gaslink
- Bord Gáis Networks
- Gas Shippers and Suppliers
- End-Users / Customers

Gaslink's customers comprise of wholesale, industrial and commercial (I&C) and residential shippers and suppliers. Gaslink is responsible for the implementation of legal and contractual arrangements required under Irish and European law in relation to shippers and suppliers. Also, Gaslink works to ensure that all wholesale and retail market arrangements meet with best industry practice.

Working directly with larger customers, (including power generation stations, regional authorities and statutory bodies) Gaslink facilitates appropriate development and connection to the natural gas network. Gaslink negotiates connection agreements with these prospective end-users and is responsible for the development of the contractual framework governing the provision of services on the gas network.

Gaslink is also responsible for the development of appropriate and customer friendly products and services in conjunction with the regulator and industry.

By supporting the development of new entrants to both the retail and wholesale markets through facilitating and mentoring their entry into the gas market, Gaslink encourages customer switching. On behalf of Gaslink, the day-to-day work of connecting small and medium industrial and commercial customers and all residential customers is carried out by Bord Gáis Networks.

## 2. Gaslink's Role in Europe

In Europe, the latest Directive, the 'Third Gas Package', was passed into law in September 2009 and is currently being enacted across Europe.

The objectives of the Package are to further progress the liberalisation of gas markets in Europe and to facilitate the development of a single European gas market. The Third Gas Package contains important measures aimed at enhancing the integration of European energy markets. These include:

- The introduction of framework guidelines and network codes to create cross border regulatory rules which will facilitate trade between national markets and ultimately their integration;
- Related to the previous point is the ability of the Commission to propose network codes for the comitology (the name for the formal EC approval process) procedure which would make each relevant network code binding;
- The enhancement of the powers and independence of national regulatory authorities (NRAs), together with the extension of their objectives to include the promotion of a single European electricity and gas market, and as part of that, the promotion of regional markets;
- Specific consideration of regional co operation and regional market development as a complement to 'top down' measures.



ENTSOG Map



The Third Gas Package explicitly envisages the development of regional markets as a stepping stone to a single European energy market.

Gaslink is actively involved in representing Ireland's interests in this process, participating in relevant organisations and working groups to ensure progress towards the single market.

## North-West Gas Regional Initiative

The first part of the move towards a single European market is the development of three regional markets – North-West, South South-East and South. Ireland is part of the North-West Gas Regional Initiative (NWGRI) which also includes The Netherlands, Great Britain, Belgium, France, Northern Ireland, Germany, Denmark, Sweden and Norway (who are members of the NWGRI as an observer only).

NWGRI's work focuses on developing and improving transparency, capacity, storage and investment arrangements in its region.

## Gaslink Involvement in European Gas Organisations

The Package also provided for the establishment of two new European-wide organisations – one for gas system operators, the European Network for Transmission System Operators for Gas (ENTSOG) and the other for regulators, the Agency for the Co-Operation of Energy Regulation (ACER).

Gaslink, as the Irish System Operator, represents Ireland as a member of ENTSOG, along with 21 other member states. ENTSOG's primary role is the development of a range of pan-European network codes which will facilitate internal market and cross-border trade in gas and ensure the evolution towards a single market.

These network codes will be mandatory to implement in Ireland. In 2011, reflecting the role and contribution of Ireland to ENTSOG, two staff members of Gaslink were seconded to the ENTSOG team in Brussels on a full-time basis.

## European Network Code Changes

During 2011, the first two network codes were developed and consulted upon. These both relate to Capacity and are broken into two areas relating specifically to Congestion Management Procedures (CMP) and Capacity Allocation Mechanisms (CAM). The aim of the network codes is to help harmonise the European gas market and provide the same rules for supply companies across all European borders to increase market competitiveness. These network codes present significant changes to how the rules and operations are presently conducted whereby different rules and restrictions apply to supply companies in different member states. Gaslink is leading various workgroups to ensure the changes are implemented when required.

## European Commission Infringement Notices

Infringement notices were issued by the European Commission to both the Republic of Ireland and Northern Ireland with respect to alleged violations of Regulation EC 1775/2005. If the Member States do not implement the internal energy market rules, the Commission says they prevent European consumers and the other market participants from benefiting from the advantages of a competitive and open energy market.

The infringements relate specifically to;

1. Failure to make maximum capacity available at the point where gas enters the Irish network from the UK network (i.e. the Moffat Entry Point).
2. Failure to declare a Relevant Point at the point of interconnection between the Irish and Northern Irish networks on the South North Pipeline (SNP).

The Irish and Northern Irish regulators have both agreed that the infringements must be addressed.

During 2011, Gaslink worked closely with its UK counterpart, National Grid, and the regulators in both jurisdictions, to develop a "Virtual Reverse Flow" (VRF) product at the Moffat Entry Point, whereby gas may be exported to the UK System by offsetting against the volume that would normally have been imported. Following extensive consultation with industry and regulators, the Moffat Virtual Reverse Flow product became effective in December 2011. Gaslink believes that this product serves to meet the requirements of the infringements as they relate to the Moffat Entry Point.

While Gaslink is dealing specifically with infringements as they relate to Ireland as a member state of the EU, development work at interconnection points such as this requires ongoing co-operation with neighbouring Transmission System Operator's and regulators in order to provide an optimal service to the Irish gas customer.



*Gaslink General Manager, Aidan O'Sullivan at ENTSOG offices in Brussels with Ann-Marie Colbert, Advisor, ENTSOG (seconded from Gaslink);, Vittorio Musazzi General Manager ENTSOG; Noel Regan, Advisor, ENTSOG (seconded from Gaslink).*

### 3. Protecting the Safety of the Network

Safety is of paramount importance to Gaslink and it is responsible for the safe control and operation of the natural gas system in Ireland.

#### Safety Cases

Licences, Gaslink is obliged to prepare a Transmission and Distribution Safety Case. This sets out arrangements for the safe control and operation of the natural gas system including: ensuring that staff meet the required standards of qualification and competence; emergency response and activation of the Natural Gas Emergency Plan; ensuring that gas transportation in the network meets the required standards for gas composition and quality; hazard assessment and mitigation of risks associated with the transportation of gas; and compliance with relevant standards and codes of practice.

#### Gas Safety Committee

In line with its responsibility for the safe transportation of gas, Gaslink is a member of the Gas Safety Committee, which is chaired by the CER. The mission of the Gas Safety Committee is to protect lives, prevent injury and minimise economic loss by ensuring the safe transmission and distribution of natural gas. The Committee meets on a quarterly basis and comprises representatives from Gaslink, the CER, the Department of Communications Energy and Natural Resources and Bord Gáis Networks.

#### Historic Peak-Day and Annual Gas Demand

	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11
	GWh/d	GWh/d	GWh/d	GWh/d	GWh/d	GWh/d	GWh/d	GWh/d	GWh/d
<b>Peak</b>									
ROI	172.1	176.6	164.6	165.7	196.7	205.9	227.5	247.6	246.0
NI+IOM	52.0	53.4	57.5	79.8	79.0	74.8	67.7	80.0	80.3
<b>Total BGE</b>	<b>224.1</b>	<b>230.0</b>	<b>222.0</b>	<b>245.5</b>	<b>275.7</b>	<b>280.7</b>	<b>295.2</b>	<b>327.5</b>	<b>326.3</b>
	GWh/y	GWh/y	GWh/y	GWh/y	GWh/y	GWh/y	GWh/y	GWh/y	GWh/y
<b>Annual</b>									
ROI	46,013	47,433	44,514	48,276	52,890	56,504	54,734	58,239	56,615
NI+IOM	12,837	13,683	17,975	19,353	20,216	19,294	18,022	17,232	17,852
<b>Total BGE</b>	<b>58,850</b>	<b>61,116</b>	<b>62,489</b>	<b>67,629</b>	<b>73,106</b>	<b>75,798</b>	<b>72,756</b>	<b>75,471</b>	<b>74,467</b>

Source: The Transmission Development Statement 2010/11 – 2019/20





## Ensuring Security of Supply

### Forecasting Irish Demand/Supply Scenarios

Gaslink is responsible for examining and forecasting the demand and supply scenarios for Ireland for the ten year period ahead, in order to ensure Ireland's security of supply and to identify any supply and capacity issues.

On an annual basis, Gaslink publishes the Network Development Statement (NDS) which aims to promote the economic and environmental benefits of natural gas to the Irish economy. It informs existing and potential users, helping them to optimise their usage of natural gas by providing data regarding forecast demand and supply scenarios over a ten year period.

Compiling the NDS involves research and consultation with suppliers of natural gas and large scale users. The NDS examines supply scenarios, including supplies from various sources such as Moffat, Corrib, Shannon LNG, Kinsale Storage and Production and Larne Storage. These scenarios are analysed against the ability of the system to meet demand, especially peak demand, for example during a period of severe cold weather.

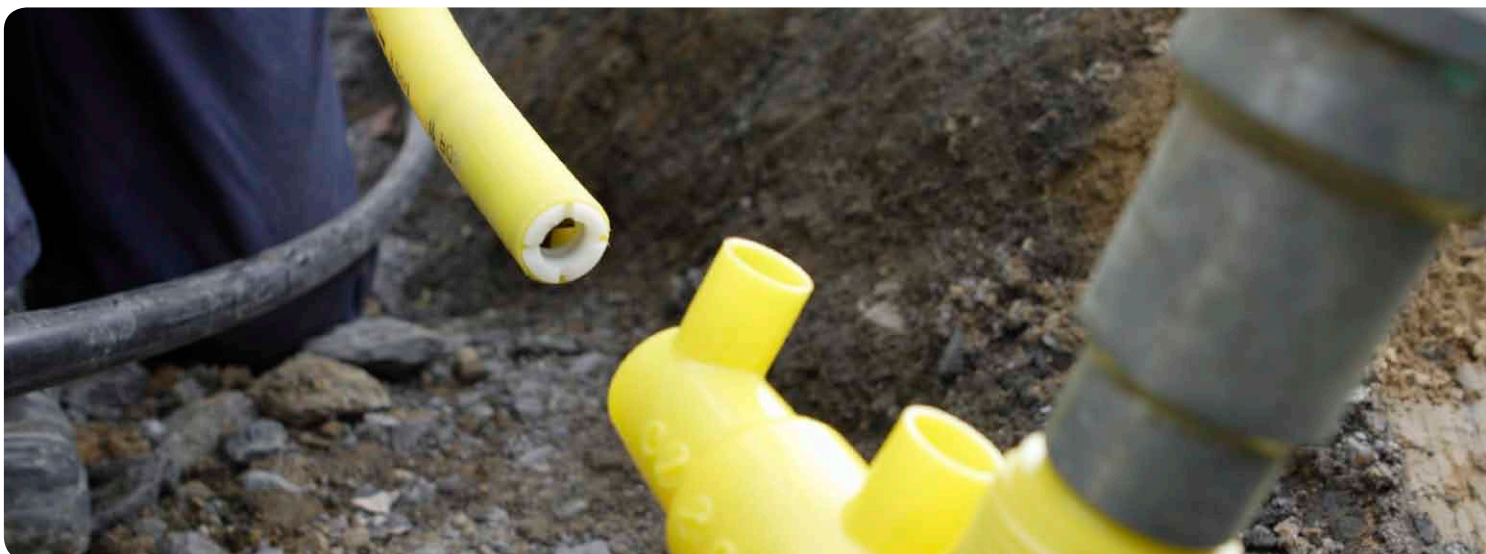
The NDS 2010/11-2019/20 forecasts that the gas demand for the next ten years is to increase, with growth being driven primarily by the power generation sector.

The annual gas demand of the power sector is expected to grow by 8.8% by 2019/20; however, it is expected to initially decline due to higher gas prices, rising renewable production and additional electricity interconnection with Great Britain. The Industrial & Commercial annual gas demand is forecast to grow by 7.7% by 2019/20 due to a forecasted recovery in the economy. The residential annual gas demand is forecast to decline by 9.5% over the same period due to increasing energy efficiency and the slowdown in new housing construction.

The 2011 NDS results indicate that there is sufficient capacity available on the existing onshore transmission system to transport the necessary gas to meet the required forecast peak-day demand over the forecast period. However, it should be emphasised that if there is any significant change to the future supply/demand outlook, the existing onshore infrastructure in Scotland may need reinforcement.

The 2010/11 to 2019/20 NDS is published on Gaslink's website at [www.gaslink.ie/publications](http://www.gaslink.ie/publications).

In line with its responsibility for the safe transportation of gas, Gaslink is a member of the Gas Safety Committee



## 3. Protecting the Safety of the Network *continued*

### European Supply/ Demand Balance

ENTSOG published the second edition of the Ten Year Network Development Plan (TYNDP) in 2011. This plan describes the ability of the European network system to meet supply and demand scenarios for the period 2011-20. As a long term outlook it has to cope with a range of uncertainties. As a document covering the interests of many different stakeholders and markets, it has to maintain a balance and the European perspective. Every new edition will bring improvement and a slightly different perspective of the future, embedded in the scenarios used.

The information provided in the 2011 TYNDP confirms the declining character of gas production in Europe, which will necessitate the increase of gas imports to cover European demand in the future from Russia, Norway, North Africa and potential LNG imports.

### Preparing for a Gas Shortage Emergency

Under EU regulations all European markets must prepare for a gas emergency, for example a shortage in the supply of gas which might affect customers. The main triggers for declaring a gas emergency include:

- Insufficient gas to meet demand.
- Damage to a critical plant.
- Gas quality emergency, including odorant failure.
- Loss of supply to more than 5,000 customers.
- Failure of a major gas market participant.

Other triggers include electricity supply deficit or failure; severe weather conditions; a flu pandemic or other medical emergency; or disruption to water, fuel, telecoms or other key infrastructure.

In its role as National Gas Emergency Manager, Gaslink is responsible for the co-ordination of gas supply emergencies and for the preparation and management of a Natural Gas Emergency Plan (NGEP), which outlines the steps to be taken in the event of a gas supply emergency.

The aim of the NGEP is to protect the safety of the general public; protect property and key infrastructure; and minimise disruption resulting from a gas emergency.

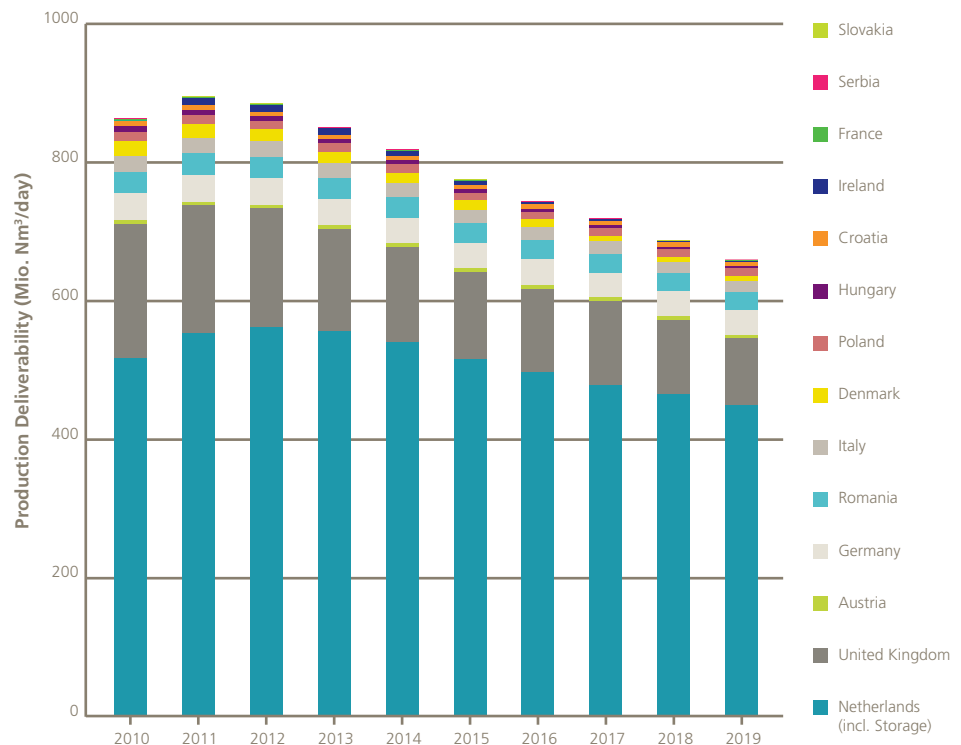
Gaslink is responsible for reviewing the NGEP on a regular basis and reporting on the results, or proposing any amendments for approval, to the CER. Gaslink submitted and received approval for a proposed revision of the NGEP to the CER in 2011. The revision includes the procedures for gas quality excursion management. These measures would be taken in the event of the gas quality parameters being breached.

A copy of the NGEP is available on the Gaslink web site at [www.gaslink.ie/safety](http://www.gaslink.ie/safety)





## Production Deliverability Part of ENTOSG Peak Day Potential Supply Scenario



Source: ENTOSG; Ten Year Network Development Plan

### All-Island and Ireland-UK Emergency Planning

Throughout 2011 Gaslink participated in meetings of the All-Island Gas and Electricity Planning Group and the Ireland-UK Emergency Planning Group.

The purpose of the All-Island Gas and Electricity Emergency Planning Group is to set out the existing onshore industry arrangements for co-operation on emergency planning, identify any gaps and propose practical measures to address any such gaps under the existing legal and regulatory framework. In particular, the Group will develop procedures for the operation of the South/North pipeline in the event of an emergency and put in place clear procedures for communication between system operators.

The aim of the NGEP is to protect the safety of the general public; protect property and key infrastructure; and minimise disruption resulting from a gas emergency.

The purpose of the Ireland-UK Emergency Planning Group is to ensure co-operation between Ireland and the UK on planning for, and responding to, a gas supply emergency and taking into account the impacts of such an event on electricity supply. This Group also provides a mechanism for consultation on the regional co-operation to be carried out under the new European Security of Supply Regulation, which came into force in 2010. The Regulation looks at measures to safeguard security of gas supply within Europe. During 2011, Gaslink progressed with the implementation of the requirements of this regulation in Ireland.

Gaslink will continue to work closely with Government and the CER and will participate in workgroups to ensure the on-going security of supply of natural gas to Ireland.



## 4. Keeping the Gas Market Competitive

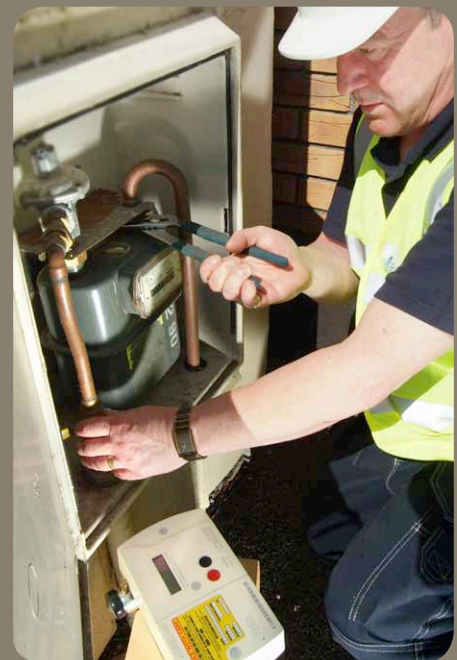
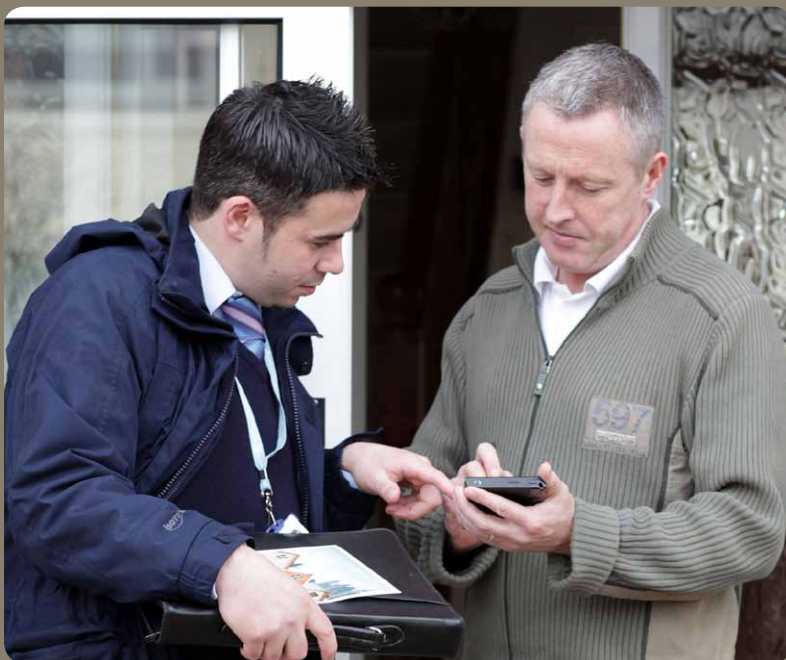
By ensuring fairness and transparency to the industry and to gas users, Gaslink is providing the environment for a more cost efficient and competitive market. International best practices are used to ensure the lowest price possible for the end-user.

Competition was further promoted during 2011 with the entry of another new shipper in the retail market, and another gas supplier entering the pre-payment metering market.

The retail market also saw the benefits of competition, with 109,000 domestic customers switching providers in 2011. This represented an increase on the 93,000 who switched in 2010 and a substantial increase on the 8,500 customers who switched in 2009.

The overall domestic market as at December 2011 was circa 631,000 domestic customers.

The current economic climate is continuing to pose challenges to customers and to energy suppliers alike. During the year Gaslink showed innovation in both wholesale and retail to the benefit of their customers, addressed some of the challenges and facilitated many requests and changes to current operations.



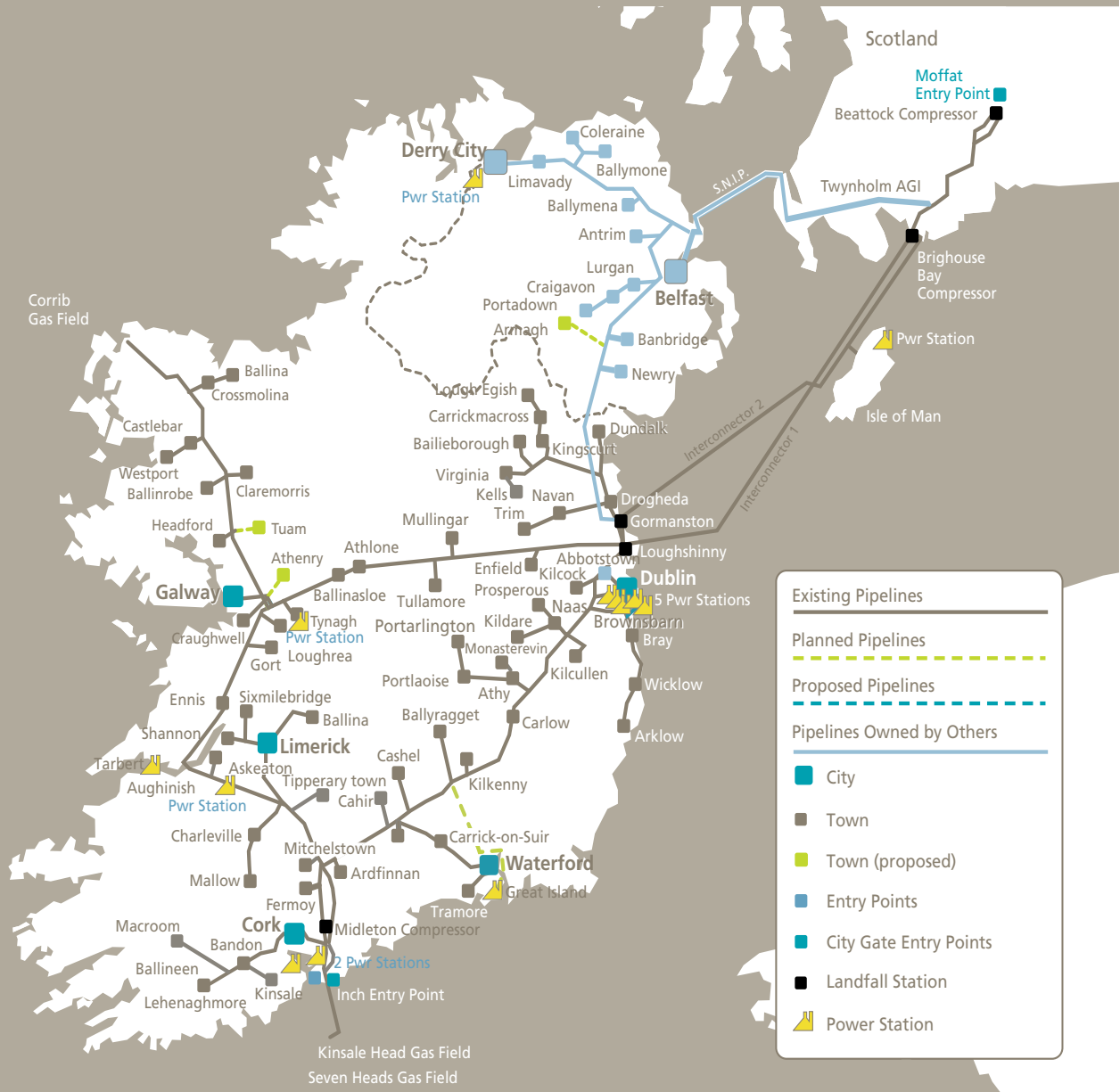
*Smart Meter being installed*



Code of Operations / Code Modifications	Gaslink's Code of Operations governs the relationship between Gaslink and the industry and can be modified to improve the operation of the market. In 2011, Gaslink in consultation with industry drafted modifications to the Code in the interests of shippers in the wholesale industry. A number of modifications were submitted to and approved by the CER.
Pressure Policy	Gaslink successfully implemented a new pipeline pressure control policy in the winter of 2011 where pipeline pressures in the transmission system were gradually increased coming into the colder months. Ensuring increased pressure in the transmission networks provides increased security of supply to the Non Daily Metered (NDM) sector.
Industry & Regulatory Training	Gaslink provided training to both shippers and regulators responding to individual requests, providing market training and providing training on European issues.
Debt Flagging	'Debt hopping' (customers changing supplier to avoid paying arrears) raises costs for suppliers, and consequently for all customers, and can exacerbate an individual's debt situation. In light of concerns raised by suppliers, consumer organisations and social advocacy groups, a debt flagging facility was introduced into the 'change of supplier' process to address this issue.
Pay before Locking	In acknowledgement of the increasing number of customers facing disconnection for non-payment of their energy bills, a 'Pay before Locking' trial was carried out in the Leinster region during 2011 to provide such customers with a final opportunity to agree a payment plan with their supplier to avoid disconnection. The trial was deemed a success and these procedures will be systemised and become standard operational practice across Ireland.
Pre-Payment Meters	Should a payment plan agreement not be reached, suppliers can offer pre-payment meters to customers who are genuinely experiencing financial difficulty in order to avoid disconnection. Pre-payment meters can benefit customers and be used as a budgeting tool. 2011 saw a sharp increase in the number of pre-payment meters, with over 54,000 installed by the end of the year. Over 21,000 of these meters were installed under the Financial Hardship Scheme, providing assistance to customers in financial difficulty.
Smart Metering	Progress was made last year on the Smart Metering programme with customer trials completed in 2011. The trials involved approximately 2,000 participants and resulted in gas savings of up to 3.6% per customer.
Usage Based Consumption Information	The results of the customer behaviour trials for Smart Metering have strongly indicated that consumers respond positively, in terms of usage reduction, to receiving cost-based consumption information. Therefore the CER is proposing that consumers will receive cost and usage based consumption information via in-home displays (IHD) and energy statements with their bills as part of the National Smart Metering Programme.
Data Protection	Data protection is fundamental to the work of Gaslink. During 2011, Gaslink reviewed its processes and procedures, identifying the roles and responsibilities of different parties operating in the gas market, and revised its Code of Operations to ensure that the data protection rights of customers are protected and that the obligations of all parties are observed.
Other Initiatives	Suppliers revenue issues were addressed in 2011 with the development of business processes and technical changes to support Revenue Protection initiatives. Other issues being dealt with include long-term inability to gain access to customer sites (to take a meter reading), gaining access to meters to disconnect and dealing with sites which have been locked but are consuming gas.

# 5. Operating Ireland's Natural Gas Network

Gaslink's vision is to provide gas services to customers efficiently, safely and without discrimination and to use an approach that is independent, participative and far-sighted in order to develop the gas market.







## The Network

By the end of 2011, Ireland's natural gas network comprised 2,415km of transmission (high-pressure) pipelines, including two sub-sea interconnectors with the UK, and 11,030km of distribution (low-pressure) pipelines, delivering gas to 656,595 premises in over 161 towns and cities across the country.

## Gas and Electricity Markets

The increased contribution of intermittent power generation in recent years, allied to the continuous evolution of the gas and electricity markets in Ireland as a result of EU developments, is presenting significant challenges to both markets. More specifically, the ever increasing penetration of wind generated power, along with the imminent introduction of the East West Electricity Interconnector to the UK, requires gas fired power generation to be more flexible and responsive to the requirements of the electricity market.

In order to foster a relationship of understanding and co-operation between the stakeholders in both markets, the CER initiated a Gas and Electricity Interactions Workshop in 2011. The first instance of the forum introduced and discussed the key interactions and interdependencies between gas and electricity operations and the challenges faced by both industries.

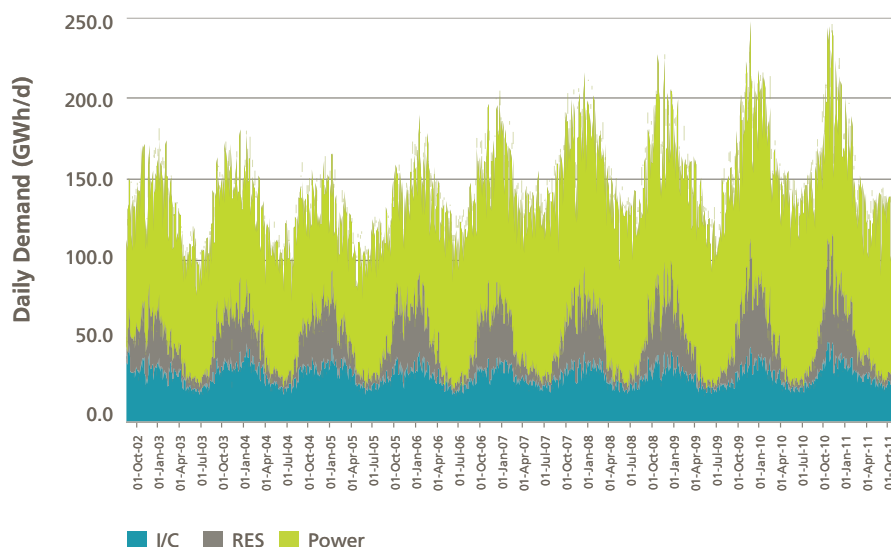
The workshop aims to identify and address medium to long term measures required to ensure the effective and efficient operation of the gas and electricity markets in Ireland. It is also hoped that the forum may allow each industry to keep the other informed of current and future developments with respect to EU Framework Guidelines and Target Models in their respective areas. Gaslink is committed to engaging pro-actively with this forum in order to best represent the interests of the Irish gas consumer. This workshop will continue in 2012.

## Gas Demand

During 2011, 54,762 GWh were transported on the network over the year, a decrease of approximately 12% on 2010. The decrease in total gas transported from 2010 to 2011 can be partially attributed to mild weather conditions and reduced power generation gas demand. Demand continues to be dominated by the power generation sector, accounting for approximately 64% of all gas transported and natural gas was the fuel used to generate 55% of electricity in Ireland in 2011.

The historic daily demand for natural gas is shown in the graph below.

### Historic ROI Demand by Sector



Source: Bord Gáis Networks  
I/C = Industrial and Commercial  
RES = Residential  
Power = Power Generation Stations

## 6. Natural Gas Entering The Irish Network

Currently Ireland's natural gas is supplied from Europe and the UK, through an 'Entry Point' at Moffat in Scotland, and from the Kinsale gas field, through an 'Entry Point' at Inch in Cork. The Corrib gas project and the potential development of storage facilities at Kinsale are two significant projects which will play an important role in securing the supply of gas for Ireland.

*Kinsale, Co. Cork*





**Moffat** Through the continuous development of entry point arrangements at Moffat and Inch, Gaslink delivers real benefit to Ireland's security and diversity of supply. During 2011 Gaslink implemented the following initiatives at the Moffat Entry Point:

- **Virtual Reverse Flow** - A Virtual Reverse Flow service was put in place at Moffat to enable Irish shippers to export natural gas at Moffat to the Great Britain market. This service was developed by Gaslink in conjunction with National Grid in the UK, the CER, OFGEM (the UK Energy Regulator) and Moffat shippers.
- **Physical Reverse Flow** - Gaslink and National Grid carried out a market test for Physical Reverse Flow at Moffat at the request of the regulatory authorities. The results of the market test indicated that currently there is no requirement for Physical Reverse Flow at Moffat. Gaslink and National Grid have therefore submitted a request to the regulators for an exemption from the requirement to introduce Physical Reverse Flow in accordance with Article 7 of the Security of Supply Regulation.
- **Potential Capacity Constraints at Moffat** - Gaslink and Bord Gáis Networks responded to a CER consultation paper concerning potential capacity constraints at the Moffat Entry Point concluding that the most appropriate solution was to reinforce the onshore Scotland network. This reinforcement would involve twinning the 50km pipeline from Culden to Brighthouse Bay which would increase the onshore Scotland gas capacity.

**Corrib** The Corrib Partners (Shell E&P Ireland Limited, Statoil Exploration (Ireland) Limited and Vermilion Energy Ireland Limited) are developing the Corrib gas field off the west coast of Ireland, in order to supply natural gas to the Irish market.

The introduction of gas from the Corrib field to the natural gas network will be most welcome. While security of supply through Ireland's interconnector with the UK is robust, the Corrib field will play an integral part in enhancing the security of supply strategy for Ireland.

2011 was a significant year for the Corrib gas project:

- All regulatory permits and consents associated with the onshore pipeline part of the project were issued and construction on this final phase commenced.
- Employment on the tunnel construction compound at Aghoos has now exceeded 100 and, despite adverse weather conditions, planned progress is on target.
- An Bord Pleanála approved the onshore pipeline application. The decision was followed by the Section 40 Consent under the Gas Act from the Department of Communications, Energy and Natural Resources and a foreshore licence from the Department of the Environment.
- The preparatory work for the Srwaddacon Bay 4.9km tunnel at Aghoos began and work was completed on the construction of the tunnel boring machine, 'Fionnuala', which will start tunnelling in 2012. Work on the tunnel is expected to take two years.

**Kinsale Energy** During 2011, PSE Kinsale Energy Limited (KEL), a wholly owned subsidiary of PETRONAS, continued to produce natural gas from the Kinsale Head, Ballycotton and Seven Heads Gas Fields and to operate the South West Kinsale gas storage facility in the Celtic sea in a safe and environmentally responsible manner. In 2011, the following operational milestones were achieved by KEL:

- Completion of the offshore installation of an upgraded three stage production compressor allowing KEL to produce gas from the Kinsale and Seven Heads reservoirs at very low suction pressures, thereby ensuring maximum recovery of remaining gas reserves.
- Completion of design works associated with the expansion of the South West Kinsale gas storage facility, which involves the installation of additional compression offshore to increase the size of Ireland's only natural gas storage facility from 230mcm (million cubic metres) to 280mcm of space. The project has now moved forward to the procurement phase with a completion date scheduled for summer 2013.

## 7. All-Island Gas Market

The regulatory authorities in the Republic of Ireland and Northern Ireland are committed to working together to establish an All-Island gas market, referred to as All-Island 'Common Arrangements for Gas' (CAG).





## Gaslink works closely with the regulatory authorities and the gas industry in both jurisdictions to progress the All-Island gas market

The aim of this project is to put in place arrangements such that stakeholders can buy, sell, transport, operate, develop and plan the natural gas market effectively on an All-Island basis.

Gaslink works closely with the regulatory authorities and the gas industry in both jurisdictions to progress the All-Island gas market. During 2011 Gaslink, in conjunction with the relevant stakeholders in Northern Ireland, developed 'Business Rules' for a number of key areas including:

- Capacity
- Nominations and Allocations
- Balancing and Shrinkage
- Financial Security, Payment and Invoicing

Initially high-level principles were developed and agreed by both Transmission System Operators (TSOs) and submitted for industry consultation. Subsequent to analysis of industry responses, more detailed 'Business Rules' were developed by the TSOs and submitted to industry for further consultation. Upon agreement of the Business Rules, an extensive programme of shipper training was undertaken. In addition to this core element of the CAG project, significant development work was carried out in terms of assessing the required data flows between TSOs and distribution operators.

In 2011 however, the regulatory authorities in both jurisdictions directed that immediate efforts should be concentrated on addressing the EU infringements; the implementation of CAG is now expected to follow.

## Joint Gas Capacity Statement (JGCS)

As part of the CAG project, both regulatory authorities are committed to a single approach to security of supply on the island which involves the production of a Joint Gas Capacity Statement (JGCS) on the island's expected gas supply and demand over the next ten years.

Gaslink and the Northern Ireland TSOs participated and assisted in the preparation of the third JGCS in 2011.

## Shippers in the Irish Market

Number of Licensed Shippers





## 8. Extending the Network

Gaslink is responsible for extending the natural gas network and connecting industrial, commercial and residential customers to it.

*Great Island, Co. Wexford*







## Adding New Towns to the Gas Network

In 2010 Gaslink completed the third and final phase of the 'New Towns Study', which determined the economic viability of connecting new towns to the natural gas network. During 2011, four towns were connected to the network:

Tipperary Town	Co. Tipperary
Cahir	Co. Tipperary
Kinsale	Co. Cork
Kells	Co. Meath

Gaslink continues to review the feasibility of connecting new towns on an on-going basis.

## Connecting New Industrial and Commercial Customers to Natural Gas

Gaslink is responsible for managing all large Industrial and Commercial (I&C) connections from the transmission system. Gaslink also processes all connection enquiries from regional authorities and statutory bodies.

Gaslink requires any connecting party to enter into Large Network Connection Agreements in compliance with the CER Connections Policy. These Agreements capture all commercial issues, including the connection charges attributable and financial security required.

On Gaslink's behalf, Bord Gáis Networks interfaces with medium and small industrial/commercial connections, institutional connections and all residential connections.

## Power Generation Connections

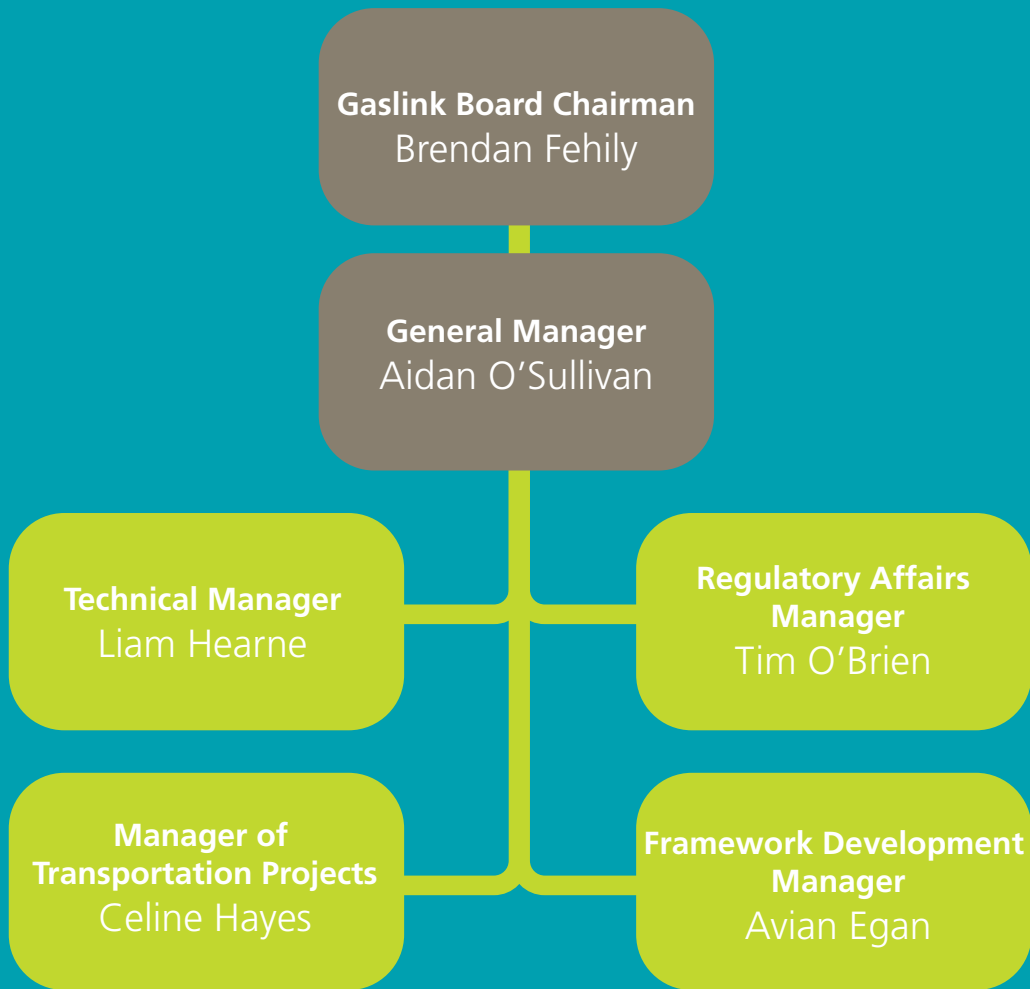
In 2011 Gaslink and Endesa Ireland entered into a Large Network Connection Agreement to commence the construction of a 46.5km high-pressure steel pipeline to fuel the 'Combined Cycle Gas Turbine' (CCGT) power plant that is currently being developed at Great Island, Co. Wexford. The pipeline is also designed to cater for future gas demand in the South East region which will bring many economic and environmental advantages to the area.

During 2011 four towns were connected to the network - Tipperary town, Cahir, Kinsale and Kells.



Gaslink General Manager, Aidan O'Sullivan signing a connection agreement in July 2011 with Carlos Temboury Molina, Endesa Ireland

# Organisation Chart







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