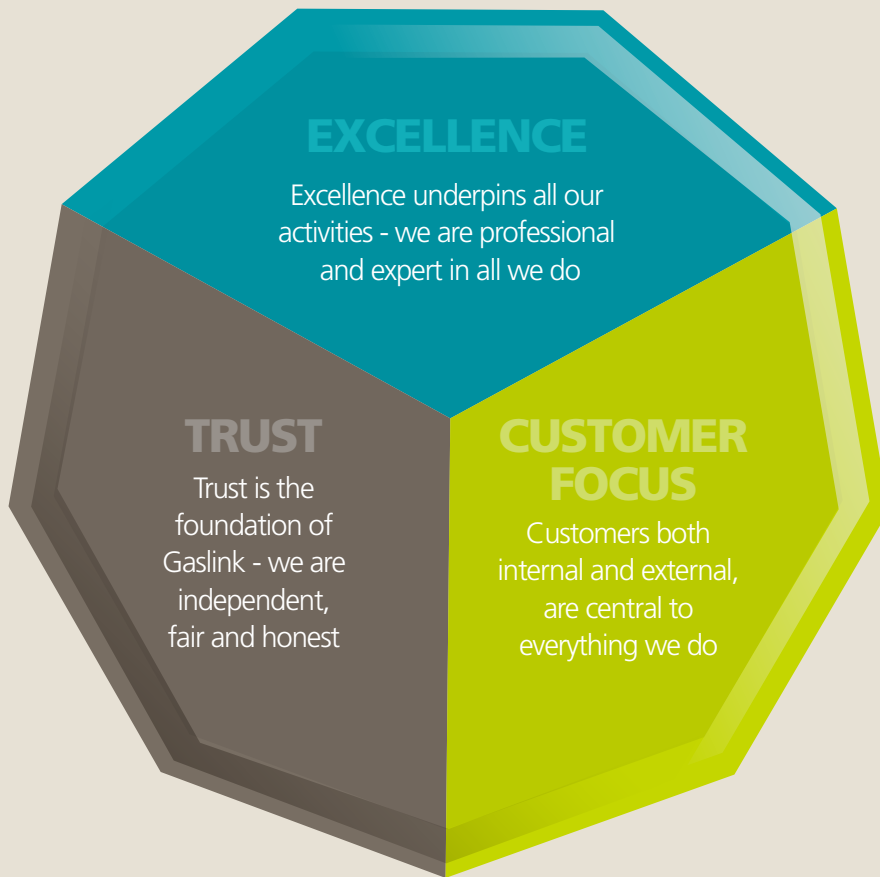




gaslink
Gas System Operator

OPERATIONAL REVIEW **2013**

GASLINK VALUES



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 SIXTH GASLINK OPERATIONAL REVIEW TO YOU.

GASLINK'S ROLE IS TO DRIVE THE DEVELOPMENT OF THE OVERALL GAS MARKET IN IRELAND AND TO ENSURE COMPLIANCE WITH EU LEGISLATION WITH REGARD TO THE INTERNAL MARKET. TO ACHIEVE THIS GASLINK ENGAGES DIRECTLY WITH SHIPPERS AND LARGE END-USER CUSTOMERS IN AN EFFICIENT, SAFE AND NON-DISCRIMINATORY MANNER. GASLINK IS ALSO HIGHLY ACTIVE IN EUROPE, AND AS A MEMBER OF THE EUROPEAN NETWORK OF SYSTEM OPERATORS FOR GAS (ENTSOG) AND GAS INFRASTRUCTURE EUROPE (GIE), GASLINK ENDEAVOURS TO ENSURE THAT THE IRISH GAS MARKET INTERESTS ARE REPRESENTED AND PROMOTED WHERE POSSIBLE.



KEY ACHIEVEMENTS IN 2013

- 1** 2013 saw the completion of the Transmission Pipeline to the Great Island Power Station in Wexford which is owned by Scottish and Southern Energy.
- 2** Gaslink continued its strong contribution within ENTSOG workgroups to influence the code development and ensure the Irish position was promoted where possible.
- 3** The Gaslink General Manager was appointed to the Board of GIE, a key European representative body for influencing EU Energy policy.
- 4** Gaslink completed the extensions of the natural gas network to the towns of Cootehill, Co. Cavan and Tuam, Co. Galway.
- 5** Gaslink established a Revenue Protection Unit to combat the tampering of meters which is a key safety concern.
- 6** Throughout the year, Gaslink continued to work closely with Shell and other Corrib Partners in supporting the progression of the Corrib project. Gaslink welcomes the continued progress of tunnelling works based in Aughooose, Co Mayo. The indigenous supply of natural gas provided by Corrib will play a significant role in enhancing Ireland's energy security of supply.

THIRD GAS PACKAGE

Gaslink in Europe

The Third Gas Package provides for the harmonisation of gas transportation arrangements throughout Europe and includes the introduction of a pan-European Network Codes. In 2013, a new staff member from Gaslink was seconded to work full-time as member of the ENTSOG team. Based in Brussels, staff work on developing the codes and continue to assist Gaslink in representing Irish interests in Europe. The seconded employee joined an existing Gaslink employee who has played a lead role in driving the ENTSOG work in relation to the Tariff Network Codes since 2011.

The Future for Gaslink

The sale of Bord Gáis Energy will be finalised in 2014 resulting in a change to the structure of Bord Gáis Éireann. It is planned that Gaslink will be integrated together with Bord Gáis Networks into Gas Networks Ireland at this time. Despite the structural changes, Gaslink will continue to operate the network until such time as it is no longer licensed to do so. The development and implementation of ENTSOG codes will be a key priority for Gaslink as the business continues to vigorously pursue new connection opportunities in 2014 for the benefit of all gas customers.

ACKNOWLEDGEMENTS

Firstly, I would like to thank my fellow Directors and the Company Secretary for their support and commitment during the year. My thanks also 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 a very busy and demanding year for Gaslink. I would also like to thank the Department of Communications, Energy and Natural Resources and the office of the Commission for Energy Regulation (CER) for their ongoing support and advice.

Brendan Fehily
Chairman, Gaslink

GENERAL MANAGER'S REPORT



RESPONSIBLE FOR SAFELY OPERATING, MAINTAINING AND DEVELOPING IRELAND'S NATURAL GAS TRANSMISSION AND DISTRIBUTION SYSTEMS SINCE 2008.

GASLINK IS AN INDEPENDENT SUBSIDIARY OF BORD GÁIS ÉIREANN WITH ITS OWN BOARD AND IS SUBJECT TO AN ANNUAL FINANCIAL PLAN APPROVED BY THE BOARD OF BORD GÁIS ÉIREANN. GASLINK IS ALSO REGULATED BY THE COMMISSION FOR ENERGY REGULATION (CER).

GASLINK OPERATES THE NATURAL GAS NETWORK IN IRELAND, PROVIDING TRANSPORTATION SERVICES TO ALL SUPPLIERS AND SHIPPERS IN IRELAND IN AN EFFICIENT AND INDEPENDENT MANNER. GASLINK'S VISION IS TO PROVIDE GAS NETWORK SERVICES TO CUSTOMERS EFFICIENTLY, SAFELY AND WITHOUT DISCRIMINATION AND TO MAKE A SIGNIFICANT IMPACT ON THE DEVELOPMENT OF THE GAS MARKET IN IRELAND.



Gaslink GM Aidan O'Sullivan and SSE Project Manager Peter Gavican, Great Island

KEY ACHIEVEMENTS IN 2013

2013 was a busy and productive year for Gaslink both in Ireland and in Europe. Key achievements included:

- 1** Completion of gas pipeline to the Great Island Power Station in Wexford.
- 2** CER Approval to connect Nenagh, Co. Tipperary to the natural gas network.
- 3** Flogas entered the Pre-Payment Metering market, further enhancing competition.
- 4** Approximately 117,000 domestic customers switched gas providers in 2013, a market service facilitated by Gaslink.
- 5** EC1775 compliance in the Republic of Ireland and Northern Ireland has been achieved.
- 6** The ten year Network Development Plan (NDP) was published in July to inform the gas market about gas usage; future demand; sources of supply and the capacity of the system.

Gaslink represents Ireland's interests in Europe and has worked with Bord Gáis Éireann to implement the Third Gas Directive, to facilitate a single European gas market. In recent years Bord Gáis Éireann has worked to develop an Independent Transmission Operator (ITO) model in line with the requirements of the Third Gas Directive. However, following the decision by the Government to sell Bord Gáis Energy, Bord Gáis Éireann will now seek certification under the Third Directive via the Full Ownership Unbundling (FOU) option in place of an ITO model. Under this model, Gaslink and Bord Gáis Networks will be integrated into a single system operator.

NETWORK DEVELOPMENT

Connection of Great Island Power Generation

Gaslink continued to progress the gas connection to supply the Scottish and Southern Energy (formally Endesa Ireland) owned power station at Great Island, Co. Wexford. Construction on the 47 km, 400 mm high-pressure steel line was completed in 2013 and the power station is expected to become operational in 2014.

Corrib Development

The Corrib Partners which includes Shell Exploration and Production Ireland, Statoil Exploration Ireland and Vermilion Energy Trust, continued the tunnelling works at Sruwaddacon Estuary which will complete the onshore section of the pipeline to bring gas ashore. During 2013, Gaslink worked with the Corrib Partners to develop the regulatory and market systems that will enable Corrib Gas to enter the Irish system in mid-2015.

New Towns

Cootehill, Co. Cavan and Tuam, Co. Galway were connected to the natural gas network in 2013. Wexford Town and Nenagh, Co. Tipperary have been approved for connection to the network subject to securing contractual commitments from key energy users in these towns. Gaslink continues to proactively engage with potential customers to ensure that the connections can progress at the earliest possible juncture.

Transmission Development

In July 2013, Gaslink published the Network Development Plan (NDP) covering the ten year period from 2012/13 to 2021/22. Ireland will continue to depend on the Moffat Entry Point and Interconnector System until such time as Corrib commences production. It should be emphasised, however, that any significant change to the future supply and demand outlook may trigger a requirement for reinforcement of the existing onshore infrastructure in Scotland.

Gaslink and Bord Gáis Networks continue to recommend reinforcing the 50 km single section of pipeline in South West Scotland to the CER to provide security of supply and additional capacity. Gaslink was successful in having this project designated as a Project of Common Interest (PCI) under regulation (EU) 347/2013 on guidelines for trans-European Energy Infrastructure.

GENERAL MANAGER'S REPORT (continued)



THE THIRD EU ENERGY DIRECTIVE AIMS TO PROGRESS THE LIBERALISATION OF GAS MARKETS ACROSS EUROPE AND TO FACILITATE THE DEVELOPMENT OF A SINGLE EUROPEAN GAS MARKET, WITH GUIDELINES AND CODES BEING DEVELOPED TO ACHIEVE THIS GOAL.

MARKET DEVELOPMENT POLICY

Retail and Wholesale Gas Market Development

Competition was further enhanced during 2013 with another gas supplier, Flogas, entering the pre-payment metering market bringing the number of suppliers active in this market to four with a fifth due to enter in 2014. Over 13% of the residential gas population now has a pre-payment meter installed. In 2013, the market assurance strategy and processes were revised to better service today's open and competitive Irish market with approximately 117,000 domestic customers switching gas providers in 2013.

Revenue Protection

In 2013, Gaslink and Bord Gáis Networks set up a Revenue Protection Unit to identify and investigate cases of alleged unauthorised interference with Bord Gáis Networks equipment. The Energy Act 2012 (Miscellaneous Provisions) outlines theft of gas offences for the first time. Revenue Protection is a licence obligation of Gaslink, Bord Gáis Networks and the gas suppliers; however the prevention and detection of gas theft and interference with equipment is a safety concern in the first instance. Gaslink engaged with key stakeholders when establishing the unit and built on the experience of other jurisdictions to develop detailed processes and procedures which have been formally approved by the CER. Work will continue to target and prevent gas theft in 2014 with a view to ensuring a safe distribution system and also reduce overall system costs to suppliers and ultimately customers.

EUROPEAN DEVELOPMENTS

GIE/GTE Investment Climate Working Group

I was appointed to the Board of Gas Infrastructure Europe (GIE) and was also appointed as Chairman of the Investment Climate Working Group of Gas Transmission Europe (GTE) in 2013. GIE is a European body which represents gas infrastructure operators with GTE in particular representing transmission system operators. Membership and participation present Gaslink with a platform to influence European energy policy for the benefit of Irish gas consumers.

ENTSOG Code Developments

The Third EU Energy Directive aims to progress the liberalisation of gas markets across Europe and to facilitate the development of a single European gas market, with guidelines and codes being developed to achieve this goal.

The Third Directive provided for the establishment of the European Network of Transmission System Operators for Gas (ENTSOG) which is responsible for the development of Network Codes whereby market rules for the harmonisation of the European gas market are defined. Gaslink is a member of ENTSOG and is actively involved in its Tariff, Capacity, Balancing, and Interoperability and Data Exchange working groups. Gaslink is responsible for ensuring that the CER, industry and internal stakeholders are kept abreast of key developments.

In 2013, Gaslink achieved compliance with the first of the European Network Codes - Congestion Management Procedures (CMP). The Capacity Allocation Mechanisms (CAM) code passed comitology and officially came into force in November 2013. The Balancing Code was approved by the comitology process



THE DEVELOPMENT AND IMPLEMENTATION OF ENTSOG CODES WILL BE A KEY PRIORITY FOR GASLINK AS THE BUSINESS CONTINUES TO VIGOROUSLY PURSUE NEW CONNECTION OPPORTUNITIES IN 2014 FOR THE BENEFIT OF ALL GAS CUSTOMERS.

in October 2013, and the first draft of the Interoperability and Data Exchange code, with considerable Gaslink involvement, was submitted to the EU Agency for Cooperation of Energy Regulators (ACER) for approval in September 2013. Gaslink also continues to contribute strongly to the Tariff Working Group as a member TSO and also through seconded staff who lead the group on a permanent basis.

In 2013, a list of 'Projects of Common Interest' was published by the European Commission under guidelines for trans-European Energy Infrastructure. The Gaslink project to reinforce the 50 km single section of pipeline in South West Scotland was selected as one of the projects due to the significant cross-border impact between Ireland and the UK. The designation allowed Gaslink to apply to the national energy regulators to grant funding to progress the project under special EU subsidies. Gaslink will engage with the Regulators and the Commission in 2014 to progress the funding application.

OUTLOOK 2014

The sale of Bord Gáis Energy will be finalised in 2014 resulting in a change to the structure of Bord Gáis Éireann. It is planned that Gaslink and Bord Gáis Networks will be integrated into a single system operator. Despite the structural changes, Gaslink will continue to operate the network until such time as the system operator licences transfer to the new network entity. The development and implementation of ENTSOG codes will be a key priority for Gaslink as the business continues to vigorously pursue new connection opportunities in 2014 for the benefit of all gas customers.

ACKNOWLEDGEMENTS

2013 was an extremely busy year for Gaslink as the first EU Codes transitioned to the national implementation phase which has been the culmination of much of Gaslink's efforts in the Markets and Regulation area over the last few years.

This massive undertaking required the continued dedication of all our staff and management and I am extremely grateful for their efforts and commitment in this regard. As ever, our customers remain central to everything we do in Gaslink and I thank them for their continued support and contribution in the development of the Irish natural gas market throughout the year. Finally, I would like to thank our Chairman, Brendan Fehily, our Company Secretary, Liam O'Riordan and fellow Directors for all their commitment during the year.

Aidan O'Sullivan
General Manager, Gaslink

BOARD OF DIRECTORS PROFILE



Brendan Fehily *Chairman*



Douglas Kelleher

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 multi-disciplinary projects. He has held a number of senior positions during his career. Brendan 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 **General Manager**

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 progressing new town, power station and large industrial connections. The development of an All-Island gas market is a key area of focus and Aidan is centrally involved at European level in the development of a single European gas market, where he represents Ireland's gas interests.

Aidan has 35 years senior management experience in the Irish gas industry. He was responsible for the procurement of natural gas supplies and sales to power generators and large industrial customers and the development of storage



Aidan O'Sullivan *General Manager*



Will Roche

agreements at the Kinsale Head gas field. In the 1990's Aidan 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.

In 2013, Aidan was appointed to the Board of Gas Infrastructure Europe (GIE) and was also appointed to chair the Gas Transmission Europe (GTE) Investment Climate Working Group where he continues to represent the interests of the Irish Gas Consumer in Europe.

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 Human Resource management, primarily in the Information Technology sector working with multi-national companies. With over twenty years of HR management experience, Denis 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 of Gaslink 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



Denis Cronin



Liam O'Riordan *Company Secretary*

Ireland and Flocord Ireland. Douglas is a member of a number of other Boards including the Regional Executive of IBEC and 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 at Bord Gáis and his current responsibilities include managing Group level regulatory affairs. 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. Will 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. Liam joined Bord Gáis in 2000 where he held a senior management position and was appointed Company Secretary in November 2007. Liam holds a professional accounting qualification and trained with Ernst & Young in Cork where he held a number of senior positions.



GASLINK MANAGEMENT STRUCTURE

Gaslink is led by Aidan O'Sullivan, General Manager. Under the Operating Agreement between Gaslink and Bord Gáis Networks. Bord Gáis Networks carry out much of the day-to-day operation and maintenance of the gas transportation system. The management team of Bord Gáis Networks deliver these services for the General Manager and hence to the Board of Gaslink, for the safe, efficient and reliable operation of the system.

The Networks Managing Director is Sean Casey. Bord Gáis Networks is organised into seven operating units managing the natural gas networks and associated commercial arrangements in Ireland. Sean's management team and their areas of responsibility are outlined below.

BRIAN SHEEHAN

Asset Management

Responsible for asset strategy and asset information; networks analysis and strategic planning; asset integrity; investment analysis and management; design of all network solutions; and programme management of capital and planned maintenance programmes on the gas network.

LIAM O'SULLIVAN

Asset Operations

Responsible for handling and progressing all customer contact and networks works activities; maintaining quality data and records; delivering capital construction contracts; executing field work to maintain and repair network assets; operating the networks safely and reliably; and the delivery of networks services, including connections, site works services and customer service.

BOBBY GLEESON

Health, Safety, Quality & Environment

Responsible for safety management systems; risk management and business continuity; health, safety and environment planning; and quality and management systems.

PADRAIC O'CONNELL

Markets & Regulation

Responsible for regulatory affairs including the delivery of services to Gaslink; shipper and meter data services; revenue protection; customer and marketing strategy; account management of large gas users; legal affairs and corporate affairs.

EDWINA NYHAN

Networks Finance

Responsible for business planning; internal audit; insurance and data protection;; financial planning & reporting; commercial including innovation and the fibre optic business Aurora.

DERMOT KELLEHER

Networks IT

Responsible for IT strategy & architecture, infrastructure & operations, IT service management and the Programme Management Office.

LIAM NOLAN

Technical Competency Development

Responsible for improving systems and processes for developing, assessing and recording the technical competency of all gas technical staff to help ensure that they have the appropriate levels of experience, knowledge and skills.

DONAL MURPHY

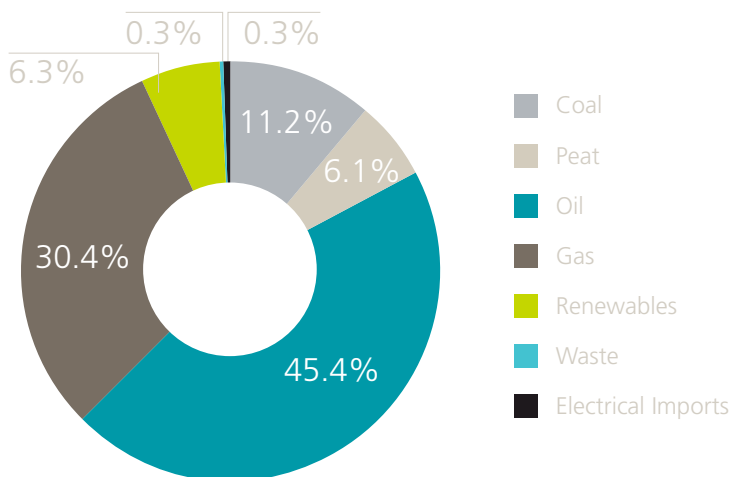
Head of Human Resources

Responsible for Manpower Planning, Recruitment, Training, Learning and Development, Competency and Performance Management, Graduate Programme.

GASLINK'S ROLE IN IRELAND

SINCE ITS INCORPORATION IN 2007 GASLINK HAS OPERATED AS THE LICENCED INDEPENDENT SYSTEM OPERATOR (ISO) FOR THE NATURAL GAS TRANSMISSION AND DISTRIBUTION NETWORKS. IT IS THE FUNCTION OF GASLINK TO FACILITATE COMPETITION AND PARTICIPATION IN THE NATURAL GAS MARKET IN AN OPEN AND TRANSPARENT MANNER FOR ALL STAKEHOLDERS.

ROI Total Primary Energy Requirement
Analysis by Fuel 2012





Gaslink is an independent subsidiary of Bord Gáis Éireann answerable to its own Board of Directors. Bord Gáis Éireann retains ownership of the networks and much of the day-to-day functions of system operation are carried out by Bord Gáis Networks on behalf of Gaslink as set out in the Operating Agreement between the two parties approved by the CER.

Together with the relevant regulatory authorities, Gaslink fosters and promotes an open and competitive market in Ireland which is driven by European energy policy, which aims to liberalise the gas market across Europe. As the ISO, Gaslink ensures that the system is operated, maintained and developed in a safe and efficient manner.

Gaslink is responsible for establishing market rules, supporting initiatives from various industry bodies and for supporting compliance with EU legislation. It also plays a driving role in the development of market arrangements to meet with industry best practice.

Gaslink's customers comprise 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.

Gaslink coordinates industry meetings at wholesale and retail levels. There are currently sixteen companies that are licenced to ship gas through the gas transportation system and Gaslink manages these contracts.

Gaslink plays a key role in supporting the development of new entrants to the retail and wholesale markets through facilitating and mentoring their entry into the gas market.

Gaslink plays a pivotal role in fostering relations with neighbouring Transmission System Operators, Regulators and Government departments to further the aim of European gas market integration. The main stakeholders in the Irish natural gas market are:

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

Gaslink is centrally involved in Liquefied Natural Gas (LNG) and gas storage projects currently underway in Ireland that will partly alleviate security of supply concerns once completed. Gaslink was appointed as Ireland's National Gas Emergency Manager (NGEM) in 2008 and is, therefore, central to any emergency response measures triggered in a gas emergency.

Gaslink works closely with the CER, our service provider Bord Gáis Networks and the gas Shippers and Suppliers to coordinate and develop the contractual framework that underpins the Republic of Ireland wholesale and retail markets.

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 prospective end-users and is responsible for the development of the contractual framework governing the provision of services on the gas network.

NATURAL GAS IN IRELAND

Natural gas plays a significant role in Ireland's energy mix, offering a lower cost alternative to other fossil fuels and provides the most efficient form of fuel in heat and electricity generation. Gas accounted for 29% of the ROI annual primary energy demand in 2011.¹ The continued roll-out of wind generation is leading to increased volatility for fossil fuel power generators. Although gas is the ideal partner for the growth of renewable energy due to its flexibility, the increasing volatility is creating challenges for gas powered generators.

The total quantity of gas transported by Bord Gáis Networks in 2013 decreased by 2% compared with 2012 levels to approximately 66,800GWh. Power generation gas demand was 7% lower in 2013 than in 2012. The reductions in overall gas demand and power generation gas demand were due to a combination of the East West Interconnector running for the full year in 2013 and increased generation from wind compared to 2012. Total system gas flows remained at 2005/2006 levels with 76% of gas transported serving the Irish market and 24% utilised in Northern Ireland and the Isle of Man. The majority of Ireland's gas demand (93%) was met by UK imports with the remaining gas supplied from indigenous reserves from Kinsale Energy through the Inch Entry Point*.

*These figures assume that all gas received at Inch entry point was from indigenous reserves. Gas storage as well as production is carried out at Inch by Kinsale Energy Limited as well as production and so it is expected that a portion of the gas supplied at Inch has been originally sourced via Moffat and transported to Inch. In 2013, 2,112 GWh of gas was imported through the interconnectors and supplied to Inch.

Gas Transported by Bord Gáis Networks



¹ Gaslink Network Development Statement 2011/12 to 2020/21.

GASLINK'S ROLE IN EUROPE

THE IMPLEMENTATION OF EUROPEAN LEGISLATION PASSED IN 2009, COMMONLY REFERRED TO AS THE 'THIRD GAS PACKAGE,' WAS FURTHER PROGRESSED IN 2013 AS A NUMBER OF NETWORK CODES MOVED TO THE NATIONAL IMPLEMENTATION PHASE FOLLOWING APPROVAL BY THE EUROPEAN COMMISSION (EC). THE ULTIMATE AIM OF THE SINGLE MARKET IS TO REDUCE THE COSTS OF TRANSPORTING GAS ACROSS EUROPE TO PROMOTE COMPETITION AND TO IMPROVE SECURITY OF SUPPLY.



Katja Beckert (PRISMA) and Celine Hayes (Gaslink)

The representative body of regulators from across Europe, the Agency for Co-operation of Energy Regulation (ACER) has been tasked by the EC to develop 'Framework Guidelines' for the various Network Codes. These guidelines must be in-line with the 'Third Gas Package'. Following extensive Europe wide stakeholder consultation for each Network Code, ACER issues the Framework Guidelines to the European Network of Transmission System Operators for Gas (ENTSOG) and directs ENTSOG to draft the Network Code. The Code drafting process also involves significant further consultation before finalisation and submission to the EC for final approval by way of a committee process by voting member states. These Network Codes are mandatory to implement in all member states, including Ireland, and Gaslink participates in the ENTSOG workgroups specific to each Code.

Gaslink, as the Irish Transmission System Operator (TSO), represents Ireland as a member of ENTSOG, along with TSOs from 25 other member states. ENTSOG's primary role is the development of the pan-European Network Codes which will facilitate the internal market and cross-border trade in gas and ensure the evolution towards a single market.

These Codes are based on framework guidelines developed by ACER. Once drafted, ENTSOG and ACER endeavour to reach agreement on the content of each Code ahead of final approval by the EC once drafted. Furthermore, Gaslink has two employees, Ann-Marie Colbert and Aine Spillane, seconded to ENTSOG for a three year period. Ann-Marie will be returning to Gaslink in 2014 after a very successful secondment where she has led the Tariff

Network Code team. A replacement for Ann-Marie is currently being recruited. Gaslink would like to acknowledge the contribution of Noel Regan to both Gaslink and ENTSOG during his three years with ENTSOG. Noel joined Eurogas during 2013 and he will continue to work with ENTSOG and other European bodies such as GIE of which Gaslink is a member.

EUROPEAN NETWORK CODE CHANGES

In 2013, a number of codes progressed to the national implementation stage, with others being approved by EC. These included codes relating to Capacity Allocation Mechanisms and Congestion Management, Transparency (publication of data) and Gas Balancing (where gas inputs to a network system must equal gas withdrawals from that system). 2013 saw considerable progress being made on the Tariff Network Code with final Framework guidelines being issued by ACER in December.

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, as different rules and restrictions apply to supply companies in different member states. Gaslink actively contributes to the various workgroups within ENTSOG to ensure the changes are implemented when required. It is anticipated that a harmonised European Energy market will lead to increased liquidity that will generate greater competition and ultimately reduce gas transportation costs across Europe.

CAPACITY ALLOCATION MECHANISM (CAM)

The objective of the CAM Network Code is to enable further development of European cross-border competition and market integration. The CAM Regulation EU 984/2013 was published in the Official Journal of the EU in 2012, and came into force on 4th November 2013, effectively becoming law in all member states from that point forward. The Regulation is to be implemented from 1st November 2015. Gaslink is preparing a Project Plan for the implementation of the CAM Regulation and held internal and Industry Impact Assessment workshops during Q3 2013. The introduction of CAM will represent a significant change in the way that Capacity is sold in Ireland, including the introduction of capacity auctions via a booking platform which is operated jointly between adjacent TSOs at cross-border points.

Gaslink is actively ensuring that Irish interests at the interconnection points between Ireland, Great Britain and Northern Ireland are represented.

JOINT CAPACITY BOOKING PLATFORM

Gaslink, along with our neighbouring TSOs, Mutual Energy Limited (MEL) in Northern Ireland and National Grid, in Great Britain has decided to adopt PRISMA as its joint Capacity booking platform at each of its Interconnection points. PRISMA will implement the requirements of the CAM Network Code which include automated auctioning of capacity at interconnection points (IPs). The target date for the implementation of PRISMA at the Irish IPs is October 2015. Sixteen TSOs from Belgium, Denmark, Germany, France and the Netherlands joined forces during 2012 to develop the "PRISMA European

GASLINK'S ROLE IN EUROPE CONTINUED

Capacity Platform" based on the existing TRAC-X system in Germany. In December 2012, PRISMA announced that three further TSOs from Austria and Italy had also joined the platform and in the first six months of 2013, this number increased to twenty four. It is expected that Gaslink will join the platform during 2014.

CONGESTION MANAGEMENT PROCEDURES (CMP)

Congestion Management seeks to address situations whereby parties who hold capacity at a cross-border point do not fully utilise the capacity, thus making that capacity unavailable to a third party. CMP provides a means by which such unutilised capacity can be returned to the market in order to maximise the use of the system in an efficient manner. In accordance with the Third Package, Gaslink introduced CMP mechanisms to the Gaslink Code of Operations on 1st October 2013. It is expected that the CMP mechanisms will require further amendment in 2015 in order to align with the requirements of CAM.

Balancing

Gas Balancing ensures that gas inputs to a system are equal to gas outputs to the system so that the system integrity is maintained. This Code will harmonise balancing rules across Europe and increase the involvement of market players in balancing the system through market based measures shift the focus of balancing the system, which is currently going through the EC commitment process. It is hoped that representation by Gaslink and the DCENR made during this process will allow Irish Shippers and TSOs to leverage off an adjacent balancing zone as an alternative to establishing our own trading platform i.e. we can avail of the National Balancing Point (NBP) facilities in the UK. This will represent an efficient and cost-effective implementation of the Balancing rules for Irish customers.

Tariffs

ACER finalised the Tariff Framework Guidelines (FGs) on 29th November 2013. These FGs set the basis for the drafting of a Network Code which will govern the setting of tariffs and the collection of revenues at all Interconnection Points in the EU.

Four cost allocation methodologies are available for a TSO and all entry points will be aggregated for revenue collection purposes. Relatively lower priced short-term capacity products are prescribed, which will facilitate Shippers to optimise their capacity booking portfolio.

ENTSOG will host workshops during 2014 to allow all stakeholders to contribute to the formulation of a draft Network Code which will be finalised and presented to ACER by 31st December 2014.

Gaslink continues as an active participant in the ENTSOG Tariff work group and various kernel groups working on business rules and preliminary code drafting to meet the ACER requirements. The Tariff workgroup is led by a Gaslink seconded adviser, Ann-Marie Colbert.

Transparency

The ENTSOG Transparency workgroup is working to determine the reporting content of information required by ACER under REMIT. As outlined within the Transparency section above, TSOs are obliged to publish a wide range of aggregated data on the existing ENTSOG Transparency Platform. Further obligations became due from 1st October 2013, following the publication of CMP obligations.

Under the various Network Codes and the REMIT provisions, there exists many transparency requirements for TSOs relating to the publication of data items, such as Capacities, Flows and Tariffs. The new ENTSOG Transparency Platform went live on October 1st 2013 at which point Gaslink began publishing all required data, which is also published on the Gaslink website.

REMIT

REMIT (Regulation on Wholesale Energy Market Integrity and Transparency) is designed to identify manipulation and insider trading in wholesale energy markets.

Both aggregated and disaggregated (Shipper level) information will be required to be reported to ACER under REMIT. Disaggregated information will not be issued by ENTSOG to ACER.

INFRASTRUCTURE AND SECURITY OF SUPPLY EUROPEAN DEVELOPMENTS

Projects of Common Interest (PCI)

Twinning of the Southwest Scotland onshore system between Cluden and Brighthouse Bay has been identified as a PCI under the Connecting Europe Facility (CEF).

Gaslink as the project promoter, together with BGE (UK) LTD as the project sponsor, submitted a Cost Benefit Analysis and an application for Cross-Border Cost Allocation (CCBA) to the CER, Northern Ireland Authority for Utility Regulation and Office of Gas and Electricity Markets (Ofgem), the Regulatory Authorities (the RAs) in October 2013. Gaslink continues to work with the RAs to finalise the proposal before the call for funding will be issued by the European Commission in the second quarter of 2014.

Security of Supply

In December 2010, EU Regulation 994/2010 came into force. This Regulation sets out measures to safeguard security of gas supply and puts many obligations on member states to deal with a gas supply interruption. During 2013, Gaslink worked closely with Government, the CER and Bord Gáis Networks to fulfill the requirements set out in the Regulation in the specified timeframe. The CER as the Competent Authority in Ireland, will progress a regional approach with the Competent Authority in the UK and this will be progressed during 2014.



North West Gas Regional Initiative Map

North-West Gas Regional Initiative

The development of three European regional markets – North-West, South South-East and South regions continued to progress in 2013. 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 (Norway is a member 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 actively participated in the NWGRI in 2013.

The 2nd Gas Regional Investment Plan (GRIP) was produced in 2013 by the TSOs of North West Europe. The GRIP complements the Ten Year Network Development Plan (TYNDP) 2013-2022 published by ENTSOG in February 2013. This GRIP covers gas infrastructure projects and analysis from the following countries: Belgium, Denmark, France, Germany, Ireland, Luxembourg, The Netherlands, Sweden and the United Kingdom.

The plan again highlighted the security of supply risk associated with the single section of pipeline on the interconnector system between Brighthouse Bay and Cluden. Gaslink continues to promote the project to twin this pipeline under the 'Projects of Common Interest' process.

PROTECTING THE SAFETY OF THE NETWORK

SAFETY IS OF PARAMOUNT IMPORTANCE TO GASLINK AND IT IS RESPONSIBLE FOR THE SAFE, RELIABLE AND EFFICIENT CONTROL AND OPERATION OF THE NATURAL GAS SYSTEM IN IRELAND.





SAFETY CASES

As part of its licence requirements, Gaslink is obliged to prepare a safety case for both the transmission and distribution of gas. The safety case 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.
- The management of the life cycle of the assets including design, construction, commissioning, maintenance and repair, reinforcement and renewal, and decommissioning and abandonment.
- Emergency preparedness.
- 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.
- Compliance with relevant standards and codes of practice.
- Measuring the performance of its Asset Safety Management System against Safety Performance Indicators (SPI's).
- Co-operation with third parties.

Safety Cases principally cover gas safety and security of supply and only address occupational health and safety where this has a direct relationship to gas safety and security of supply.

The CER audits the Safety Cases throughout the year to ensure that they are fit for purpose.

GAS SAFETY COMMITTEE

In line with its responsibility for the safe transportation of gas, Gaslink is a member of the Gas Safety Committee 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, distribution and use of natural gas. The Committee meets on a quarterly basis and comprises representatives from Gaslink, the CER, the DCENR and Bord Gáis Networks.

REVENUE PROTECTION

The Revenue Protection Unit (RPU) has developed processes and procedures detailing the parameters of the work being undertaken in this area. These processes were approved by the CER at a Revenue Protection Workshop at the end of 2013.

Gaslink is actively identifying, investigating and exchanging meters suspected of unlawful interference. Any meters suspected of interference are exchanged and re-checked in stores. 300 meters have been confirmed as tampered with to date.

Together with Bord Gáis Networks, Gaslink has almost completed a read-cycle of all Prepaid Meters (PPMs). An access rate of 80% has been achieved and any meter reads flagged as exceptions are being investigated by the RPU. Sites where access was not gained have been further analysed and a subset of these, 1,200 sites, will be similarly investigated. It should be noted that the number of sites suspected of tampering in the PPM sector is lower than initially anticipated.

In 2014, the RPU will begin a media campaign to raise awareness of the issues involved with meter tampering. It will inform end-users about: 1) safety risks, 2) tampering is a criminal offence, 3) who bears the costs as a result of tampering, 4) how to report suspected tampering. The campaign will involve a radio advert, outdoor posters at Luas/bus stop shelters, door-to-door leaflet drops and a bill-insert.

Gaslink has appointed four Authorised Officers (AOs) who have powers under the Energy Act¹ to enter and search premises, on foot of a search warrant, suspected of meter tampering. These AOs have been trained and equipped with the necessary tools to perform these additional functions. Four sites were visited by the AOs to date with a view to progressing initial legal proceedings in 2014.

FUTURE NETWORK DEVELOPMENT

Forecasting Irish Demand/ Supply Scenarios

On an annual basis, as part of its licence obligations, Gaslink publishes the Network Development Plan (NDP). This Plan includes the transmission system's forecast of future demand and supply, together with an analysis of the ability of the system to meet resultant flows of gas. Future system reinforcement requirements arising from these flows are also identified.

¹ The Energy (Miscellaneous Provisions) Act 1995, as amended by Section 5 of The Energy (Miscellaneous Provisions) Act 2012.

PROTECTING THE SAFETY OF THE NETWORK CONTINUED



Philip Barry BGN Technician, inspecting an AGI valve

Compiling the NDP involves research and consultation with suppliers of natural gas and large scale users. The NDP examines supply scenarios, including supplies from various sources such as Moffat; Corrib; Kinsale Storage and Production; Shannon LNG; 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.

Despite the impacts of increasing renewable generation capacity, increasing gas prices and greater energy efficiency, the NDP 2013 forecasts that gas demand is anticipated to grow over the next ten years.

The annual power sector gas demand is expected to increase by 21% over the period to 2021/22 at an average growth rate of 2.4%. This growth rate is higher than the forecast electricity demand growth rate due to the increase in gas-fired generation within the energy mix and the more favourable position of gas fired generation in later years with the removal of Public Service Obligation (PSOs) supports from peat, increasing carbon and coal prices.

The annual Industrial & Commercial gas demand is forecast to grow by 14% by 2021/22 at an average growth rate of 1.7%. The majority of the growth is anticipated within the transmission connected Industrial & Commercial sites with the distribution connected sites expected to show more moderate growth.

The residential annual gas demand is forecast to decline by 6% over the same period due to a combination of improved building regulations for new houses, increased energy efficiency savings for existing houses and the low amount of new housing construction.

The NDP 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 next six to seven years. 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. In the absence of reinforcement, Gaslink stresses the need to develop appropriate demand side measures. It should be noted that some of the lower pressure local area (regional) transmission networks are likely to require capital investment to meet future capacity needs.

The NDP 2013 is published on Gaslink's website at www.gaslink.ie/publications.

EUROPEAN SUPPLY/ DEMAND BALANCE Ten Year National Development Plan

ENTSOG publish their ten-year plan on a biennial basis, the most recent covering the period 2013-2022.

ENTSOG ran an open and transparent stakeholder engagement programme, which provided the opportunity for stakeholders to influence this edition of the TYNDP.

This TYNDP shows yearly gas demand for Europe is expected to grow on average by 1% over the next 10 years. This growth is expected to come mainly from gas consumption by power generators. The electricity sector's demand is anticipated to increase by 33% over the 10-year period.

Preparing for a Gas Shortage Emergency

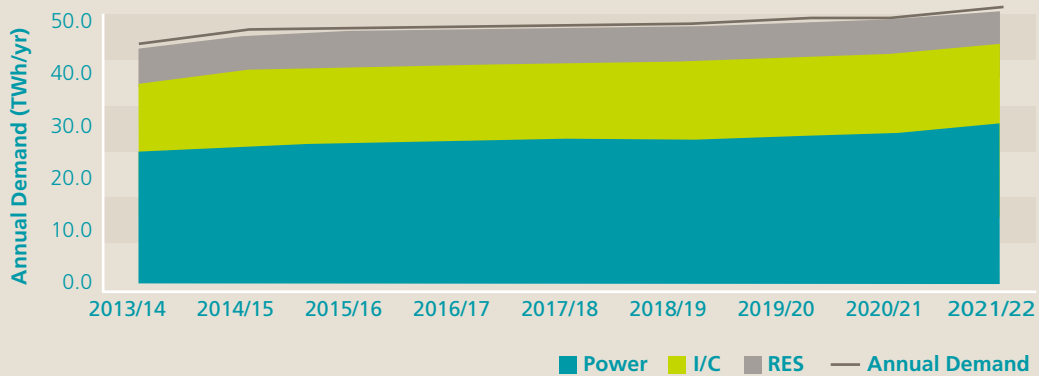
In December 2010, EU Regulation 994/2010 came into force. This Regulation sets out measures to safeguard security of gas supply and puts many obligations on member states to deal with a gas supply interruption. During 2012, Gaslink worked closely with Government, the CER and Bord Gáis Networks to prepare the following national documents:

- A Risk Assessment
- A Preventive Action Plan
- An Emergency Plan

During 2012, the CER, as the Competent Authority in Ireland, consulted with industry on the above documents and final versions of the documents were published at the end of 2012 in accordance with the Regulation's timeframe.



Annual ROI Gas Demand Forecast



The risk assessment shows that Ireland is unable to meet the infrastructure standard in the short-term. The Regulation provides that the Competent Authority may deem the obligation to be fulfilled at a regional level instead of at a national level, where appropriate. Thus, the CER is progressing a regional approach with the Competent Authority in the UK and this will continue during 2014.

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.

All-Island and Ireland-UK Emergency Planning

During 2013 Gaslink participated in meetings of the All-Island Gas and Electricity Emergencies Group and the Ireland-UK Gas Emergency Planning Group.

The purpose of the All-Island Gas and Electricity Emergencies 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 same 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 communications between system operators.

As noted earlier, under EU Regulation 994/2010 it is evident that Ireland is unable to meet the infrastructure standard in the short-term and will seek to fulfill it at a regional level. This Planning Group provides a mechanism for consultation on a regional approach which will be progressed during 2014.

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.

Task Force on Emergency Planning (TFEP)

The TFEP was established in 2005 to examine the interactions of the Irish gas and electricity systems in emergency or potential emergency situations and implement appropriate changes to ensure robust co-ordinated emergency arrangements in the gas and electricity sectors.

There is considerable change taking place in the Irish energy sector at present, including high renewable targets; smart grids; the integration of electricity and gas European markets; and the introduction

of framework guidelines and codes for electricity and gas. In addition, EU Regulation 994/2010 imposes obligations in regard to security of gas supplies including preparation of risk assessments, preventive action plans and national emergency plans, which need to be worked into the existing emergency planning and response regime.

The role of the TFEP is to act as a focal point for those whose work involves emergency planning response and management in the gas or electricity sectors. It seeks to inform the parties of relevant developments in the sectors, co-ordinate the work of the parties and encourage appropriate co-operation to ensure preparedness for, and robust responses to, emergencies in the gas or electricity sector. It fosters an understanding of the gas and electricity sectors and the impact that an emergency or potential emergency in either sector would have on the other.

EXTENDING THE NETWORK

GASLINK IS RESPONSIBLE FOR EXTENDING AND CONNECTING NEW I&C AND RESIDENTIAL CUSTOMERS TO THE NATURAL GAS NETWORK ACROSS THE COUNTRY.





Tuam, Co. Galway

ADDING NEW TOWNS TO THE GAS NETWORK

Gaslink completed the extension of the natural gas network to the towns of Cootehill, Co. Cavan and Tuam, Co. Galway in 2013. The CER approved the connection of Wexford town to the natural gas network in December 2012 and the connection of Nenagh to the network in May 2013, subject to Gaslink securing contractual commitments from key energy users in these towns. Gaslink continues to work with large energy users in the two towns to progress these contracts and to assess the economic viability of connecting other new towns to the network.

CONNECTING NEW INDUSTRIAL AND COMMERCIAL CUSTOMERS TO NATURAL GAS

Gaslink is responsible for managing all large 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.

In 2013, there was an increase in the number of connection queries which were received from the dairy sector. The industry is anticipated to experience significant growth due to the forthcoming abolishment of milk quotas in 2015.

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

POWER GENERATION CONNECTIONS

Gaslink continued to manage the progression of the gas connection to supply the Scottish and Southern Energy (formerly Endesa Ireland) owned power station at Great Island, Co. Wexford.

The 'Gas to Great Island' transmission pipeline was commissioned in 2013. This 47 km pipeline will bring gas to the new power station in Great Island, Co. Wexford and represents the largest single connection project ever completed by the company.

EXTENDING THE NETWORK CONTINUED



One of BGN's fleet of CNG vehicles

NATURAL GAS AS A TRANSPORT FUEL

In accordance with its objective to grow the size of the Irish natural gas market, Gaslink and Bord Gáis Networks are developing the application of natural gas as a transport fuel. Known as Compressed Natural Gas (CNG), this fuel is used across the world within Natural Gas Vehicles (NGV). CNG is the same clean and efficient fuel used to heat homes, cook food and generate electricity, simply compressed to save space in a vehicle.

As the commercial fleet market is the major transport fuel consumer and emissions producer, it is an ideal fit for natural gas as a transport fuel. In order to meet environmental, economic and physical challenges, a clean, affordable and technically proven fuel is required. Only natural gas can deliver as a viable substitute to diesel.

Bord Gáis Networks has conducted detailed, on the ground, trials with commercial consumers in key target segments. From these trials, CNG has demonstrated the following benefits:

- Significant reductions in emissions including Carbon Dioxide, Particulate Matter and Nitrogen Oxide
- 25% fuel savings compared to diesel or petrol
- Rapid fleet transition due to proven technology and similar filling times to diesel

At a national level there are additional benefits for Ireland through a reduction in the dependency on oil and diversity in the energy mix within the Irish transport system.

The transition to natural gas in transport also creates a pathway to Biogas (Gas developed from organic sources, such as grass or landfill material), thus providing the transport sector with a completely renewable indigenous fuel source.

Gaslink is dedicated to the development of a CNG market in Ireland through the provision of refuelling infrastructure, allowing fast, safe and reliable refuelling to the market. Our vision is that natural gas will become the fuel of choice for the commercial and public transport sectors, reducing Ireland's transport emissions in line with international agreements, while allowing the Irish economy to remain innovative and competitive in an international context.



The Dairy Industry is a key growth area for Natural Gas

RENEWABLE GAS

Ireland has significant potential for renewable gas production from sustainable sources such as agricultural and food industry waste, bio-degradable refuse and waste water treatment plants. Development of renewable gas in Ireland, using proven and cost-effective production methods, which are already deployed internationally, could offer an indigenous, renewable and sustainable source of energy and reduce import dependency. Up to 12% of Ireland's long-term gas supply requirements could be supplied from renewable gas. In 2013, Gaslink and Bord Gáis Networks actively engaged with key stakeholders to make the necessary preparations to facilitate the first injection of renewable gas into the Irish pipeline network. The CER initiated a consultation on setting the framework. Gaslink will continue to engage and promote the development of renewable gas production in 2014 as Ireland moves closer to its first operational production facility.

GROWTH IN THE DAIRY SECTOR

In recent years, many of the new towns connected to the network have had, as key anchor loads, companies from the dairy industry. In Macroom, for example, Nutricia Infant Nutrition was a key initial customer. There is significant diversity within this industry, e.g. Milk processing, butter products, cheese products, whey processing, infant formula etc. Dairy processing plants, which are currently connected to the natural gas network, are significantly contributing to gas demand on the system, and these facilities are also in expansion mode.

In 2010, the Department of Agriculture, Forestry and the Marine published a major strategy 'Food Harvest 2020' setting out a range of objectives for the entire agricultural sector for the next decade. This publication forecast a 50% increase in milk production by 2020. This is supported by evidence from New Zealand, which has shown significant growth. The potential export markets of China and India were also examined. According to the Central Statistics Office (CSO), China's growth as an importer of dry milk products is expected to continue as imports of whole milk powder and skimmed milk powder are forecast to grow by 12% and 18% respectively, in 2013.

Gaslink is currently in discussions with a number of key players in the dairy industry who are either seeking an expansion of their existing gas usage or who have requested new gas connections to their sites. Gaslink will continue to target this key national industry sector for growth opportunities as well as continuing to promote gas as the fuel of choice for all industry.

DEVELOPMENT OF RENEWABLE GAS IN IRELAND, USING PROVEN AND COST-EFFECTIVE PRODUCTION METHODS, WHICH ARE ALREADY DEPLOYED INTERNATIONALLY, COULD OFFER AN INDIGENOUS, RENEWABLE AND SUSTAINABLE SOURCE OF ENERGY AND REDUCE IMPORT DEPENDENCY.

OPERATING IRELAND'S NATURAL GAS NETWORK





Existing Pipelines

Planned/Under Construction

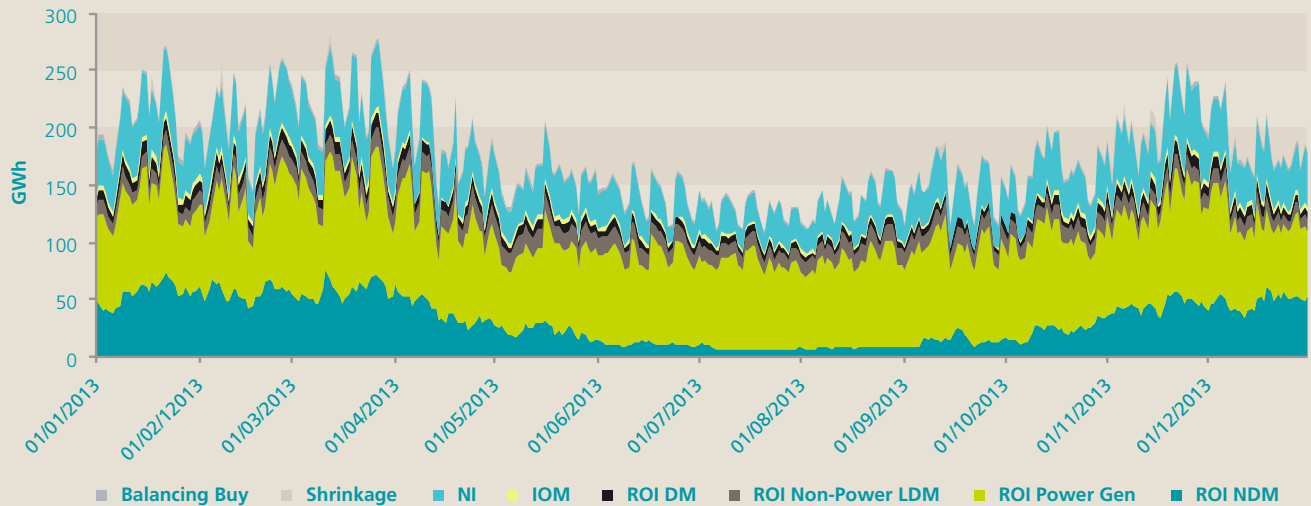
Pipelines Owned by Others

- City
- Town
- Town (proposed)
- Entry Points
- City Gate Entry Points
- Landfall Station
- ▲ Power Station

NATURAL GAS ENTERING THE IRISH NETWORK

AT THE END OF 2013, THE GASLINK NATURAL GAS TRANSPORTATION SYSTEM COMPRISED A NATIONAL DISTRIBUTION PIPELINE NETWORK OF 11,218KM AND A TRANSMISSION PIPELINE NETWORK OF 2,467KM. THE TRANSMISSION SYSTEM IS LINKED TO THE UK AND CONTINENTAL GAS MARKETS THROUGH TWO INTERCONNECTOR PIPELINES BETWEEN IRELAND AND SCOTLAND. NATURAL GAS IS NOW AVAILABLE IN OVER 160 POPULATION CENTRES IN 19 COUNTIES SERVING OVER 666,000 GAS USERS THROUGHOUT THE COUNTRY.

Total System Demand Breakdown



Source: Bord Gáis Networks

THE NETWORK

At the end of 2013, the Gaslink natural gas transportation system comprised a national distribution pipeline network of 11,218km and a transmission pipeline network of 2,467km. The transmission system is linked to the UK and Continental gas markets through two Interconnector pipelines between Ireland and Scotland. Natural gas is now available in over 160 population centres in 19 counties serving over 666,000 gas users throughout the country.

GAS DEMAND

During 2013, 53,541 GWh of natural gas was transported on the network over the year, a decrease of approximately 2.2% on 2012. The decrease in total gas transported from 2012 to 2013, can be partially attributed to reduced power generation gas demand. Demand continues to be dominated by the power generation sector, accounting for approximately 58% of all gas transported. Natural gas was the fuel used to generate 55% of electricity in Ireland in 2013.

GAS AND ELECTRICITY MARKETS-CHANGING MARKET CONDITIONS

The nature of the energy industry in Ireland is changing significantly due to the rise of renewable sources of power and EU developments. These changes require close co-operation between all sectors of the energy industry, in particular between gas and electricity.

Gaslink, Bord Gáis Networks, the CER and Eirgrid worked together throughout 2013 to promote increased understanding and co-operation between the gas and electricity markets in Ireland. Gaslink presented at a Gas and Electricity Interaction Workshop in 2013.

With increased penetration of Renewable Energy sources into the All-Island Electricity Market, there is a requirement for increased focus on the interactions, intended and un-intended between the gas and electricity markets. Gaslink will take a proactive approach during 2014 to ensure the maximum level of co-operation is achieved between all market participants.

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 further development of storage facilities at Kinsale are two significant projects which will play an important role in securing the supply of gas for Ireland.

NATURAL GAS IS NOW AVAILABLE IN OVER 160 POPULATION CENTRES IN 19 COUNTIES SERVING OVER 666,000 GAS USERS THROUGHOUT THE COUNTRY.

NATURAL GAS ENTERING THE IRISH NETWORK CONTINUED



Progress on the tunnelling works at Sruwaddacon Estuary; Corrib Gas Project

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 Corrib project is being constructed in four parts:

- (1) Offshore wells (of which five have been made ready for production)
- (2) Offshore pipeline
- (3) Onshore pipeline
- (4) A gas processing terminal

Significant progress was made in the latter half of 2013 in the tunnelling works at Sruwaddacon Estuary which is required to complete the onshore section of the pipeline.

In 2013, Gaslink continued to progress final preparations with the Corrib partners for the arrival of Corrib Gas into the network. Back-feed gas will be used from the Gaslink system to commission the Corrib Gas Terminal systems in 2014, with full commercial forward flows coming on steam in mid-2015. The indigenous supply provided by Corrib will play a significant role in enhancing Ireland's energy security, delivering up to 60% of Ireland's natural gas needs at peak production.

MOFFAT

MOFFAT VIRTUAL REVERSE FLOW

Potential Development of Enhanced Reverse Flow Product

Since the introduction of this product, industry has been advocating the development of an enhanced reverse flow product which would offer greater flexibility to Shippers. Gaslink has submitted a high level cost estimate to the CER in relation to the potential development for an enhanced Moffat Virtual Reverse Flow product.

It is expected that the CER will advise whether Gaslink should formally proceed with the development of the enhanced product, which would require a significant resource commitment over a period of 12 months.

SIGNIFICANT PROGRESS

WAS MADE IN THE LATTER HALF OF 2013 IN THE TUNNELLING WORKS AT SRUWADDACON ESTUARY WHICH IS REQUIRED TO COMPLETE THE ONSHORE SECTION OF THE PIPELINE.



CEO Kinsale Energy, Fergal Murphy, Gaslink GM, Aidan O'Sullivan and Head of Commercial Kinsale Energy, Kieron Carroll at the Inch facility



CEO Kinsale Energy, Fergal Murphy and Gaslink GM, Aidan O'Sullivan at the Inch Control Room

Kinsale Energy

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. The offshore facility, together with the onshore terminal at Inch, have been of significant importance to the Irish gas market since 1978. As production at the facility has declined, the development of the associated storage facility has provided an important security of supply source to the country.

Kinsale Energy – Company History

Exploration for offshore oil and gas began in Ireland during the early 1970s. The Kinsale Head Gas Field was discovered in 1971 by the US Company Marathon Oil Corporation. The field, which is 50 kilometres off the coast of Co. Cork, in 90 meters water depth, is still the largest single hydrocarbon discovery in Ireland, and PSE Kinsale Energy Limited is currently the only company producing natural gas from Irish offshore waters.

The natural gas in Kinsale Head is located in reservoirs some 3,000 feet beneath the floor of the Celtic Sea and is produced to surface through two fixed steel production platforms, Alpha and Bravo, which were installed in 1977. Production began in 1978 initially supplying gas to the power stations at Aghada and Marian and subsequently to the entire country.

Peak production occurred in 1995 at 99 billion cubic feet (bcf) for that year. The field is now in the decline phase and current annual production is 8 bcf per year.

A number of satellite gas fields were discovered and tied back to the platforms through 1990-2003, including:

- Ballycotton in 1991
- Southwest Kinsale in 1999
- Seven Heads in 2003 (developed by Ramco Energy)


Gas from satellite fields such as Ballycotton is produced using subsea-well technology, whereby the wellheads are on the sea-floor and controlled remotely from one of the main production platforms. These satellite fields may be very long distances from the platforms, such as Seven Heads, which is 35km southwest of Kinsale Head.

Gas from the offshore fields is combined, compressed and piped from the Alpha platform to Inch Terminal near Midleton, Co. Cork. From Inch Terminal, the gas is then metered and transferred to Bord Gáis Éireann (BGÉ) for distribution nationwide. The Southwest Kinsale Field has now been redeveloped as Ireland's first offshore gas storage facility and was licensed by the Commission for Energy Regulation in 2006.

The company was acquired by PETRONAS in 2009, following a decision by Marathon Oil Corporation to exit the Irish market. PETRONAS is a major Fortune 500 oil and gas company, with extensive world-wide gas and LNG operations.

GAS MARKET COMPETITION

GASLINK IS RESPONSIBLE FOR ENABLING COMPETITION IN THE NATURAL GAS MARKET IN IRELAND. BY ENSURING FAIRNESS AND TRANSPARENCY TO THE INDUSTRY AND TO GAS USERS, GASLINK PROVIDES THE ENVIRONMENT FOR A COST-EFFICIENT AND COMPETITIVE MARKET. INTERNATIONAL BEST PRACTICES ARE USED TO ENSURE THE LOWEST PRICE POSSIBLE FOR THE END-USER.





CNG Filling Station at Gasworks Road, Cork

2013 saw a record year of customers changing Shipper with 117,000 changes taking place in 2013, up from 110,000 in 2012, signalling continued strong competition amongst existing Shippers and a willingness of customers to change Shippers. This represents a Change of Shipper transaction at over 17% of all gas points; this continues to rank Ireland as one of the most active markets for switching worldwide.

Gaslink will progress a review of its Connection Policy during 2014 to encourage new connections to the system.

Gaslink aims to ensure that gas is a competitive fuel source and continues to be responsive to the economic environment, suppliers and end-users in both the wholesale and retail sectors.

Areas of Gaslink development include:

- **Code of Operations / Code Modifications** – Gaslink’s Code of Operations governs the relationship between Gaslink and the Shippers in the industry and can be modified to improve the operation of the market. In 2013, 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. Implementation of the EU codes remained a key focus in 2013 and will continue to be over the coming years.

- **European Developments** – The Code Modification Forum was formally recognised by the DCENR in 2012 as the Industry Forum for European Departmental input into the Comitology process. During 2013 Gaslink provided regular industry updates on the European Network Code development process. There will be increased focus on the Comitology process going forward and Gaslink will continue to ensure that the best interests of Irish gas consumers are protected throughout all the Code drafting and approval phases.

- **Pre-Payment Meters** – In 2013 Gaslink continued to lead and champion the successful nationwide roll-out of a prepayment metering service that facilitates ‘Pay As You Go’ (PAYG) energy tariffs for a wider customer base. Prepayment metering allows gas customers to purchase their credit at vending outlets and apply that credit to their meters. In this way, the customer can manage their energy expenditure in a controlled and regular manner and it is an alternative to receiving a bill from their supplier at the end of each billing period. Last year saw continued growth in the PAYG sector with over 83,000 PAYG meters in service by year end, up from 67,000 meters in 2012. Over 13% of the residential gas population now has a PAYG meter installed. Outlets to purchase gas credit also grew, with over 1,400 outlets now available for customers nationwide. Gaslink also completed work to deliver a PAYG solution across all residential gas suppliers during 2013.

- **Smart-Metering** - The CER National Smart-Metering programme is focussed on a combined gas and electricity solution. During 2013 Gaslink and Bord Gáis Networks continued to fulfil their roles as key stakeholders in the delivery of this programme in co-operation with the CER and ESB Networks. There was active participation in extensive industry stakeholder work-shops held by the CER on the high-level design options for national smart-metering infrastructure. A key premise of the designs is that the Smart Metering communications infrastructure will be shared between the gas and electricity sectors in order to benefit from combined efficiencies and leveraging of costs. The workshops culminated in a public consultation at the end of 2013.

The final smart-metering solution will allow householders to have more accurate and frequent meter readings. Furthermore, it will ultimately allow householders to better manage their energy consumption and costs, and will also enable householders to contribute towards national targets for improved energy efficiency and carbon emission reduction.





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