

# 2012

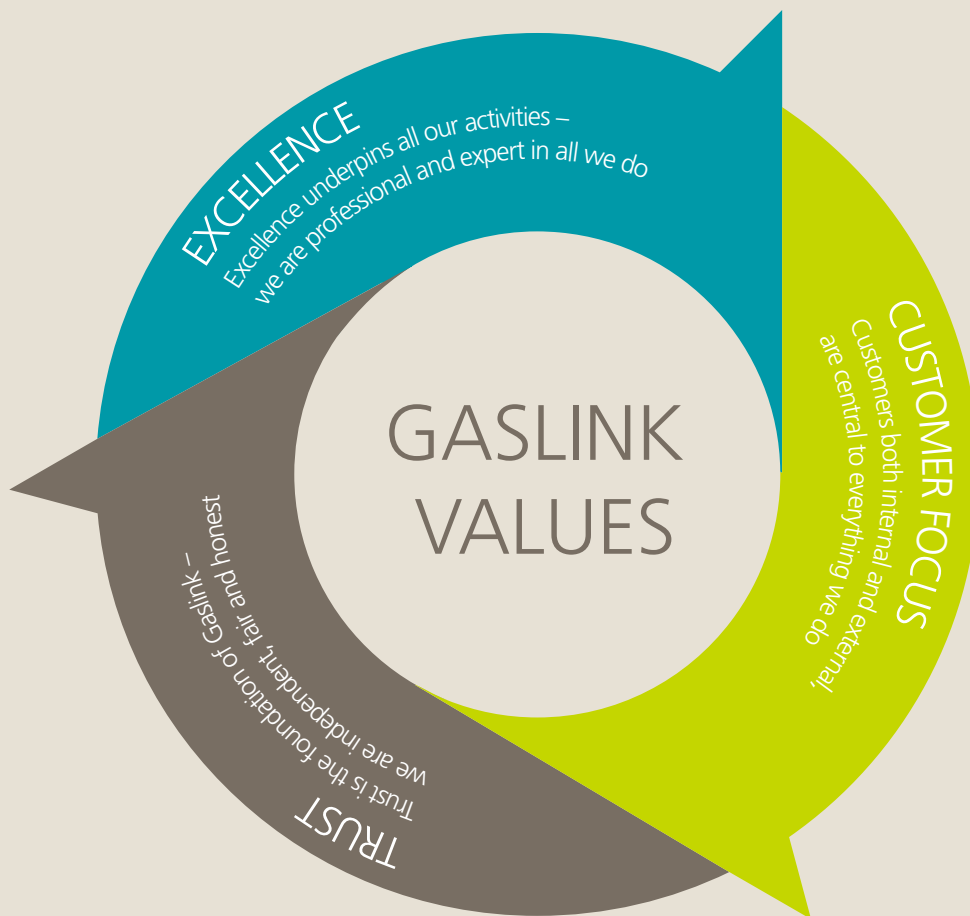
OPERATIONAL REVIEW

gaslink  
Gas System Operator

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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

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I HAVE THE PLEASURE OF PRESENTING  
THE FIFTH GASLINK OPERATIONAL  
REVIEW TO YOU.



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Gaslink's role is to impact on the development of the overall gas market in Ireland. 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 Transmission System Operators for Gas (ENTSOG), Gaslink endeavours to ensure that the Irish gas market interests are represented and promoted where possible.

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## KEY ACHIEVEMENTS IN 2012

Gaslink continued to engage actively with Endesa (and subsequently Scottish and Southern Energy (SSE)), in securing connection agreements relating to the power station in Great Island, Co Wexford.

Gaslink continued its representation within European Network of Transmission System Operators for Gas (ENTSOG) work groups to influence the code development and ensure the Irish position was promoted where possible.

Gaslink progressed further New Town connection developments in Cootehill, Macroom and Wexford.

Having worked closely with the International Energy Agency (IEA) in its review of the Irish Energy policy, the IEA produced a positive report on Ireland and on the development of gas infrastructure in Ireland.

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 commencement of tunnelling works based in Aughooose, Co Mayo. The indigenous supply provided by Corrib will play a significant role in enhancing Ireland's energy security of supply.

## 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 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.

As part of this decision, it was confirmed by Government that the Irish Natural Gas Network will remain in state ownership as will Bord Gáis Networks. This raised the possibility that Bord Gáis Éireann would ultimately seek certification under the Third Directive via the Ownership Unbundling option rather than the ITO model. In this scenario the re-integration of Gaslink back into Bord Gáis Éireann would occur after a sales transaction has been completed. Gaslink continues to work with the wider Bord Gáis Éireann group on engaging Regulators and EU Commission representatives to gain clarity on how best to achieve Third Directive compliance.

Gaslink is working with Bord Gáis Éireann 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.

## 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 code. Two staff members from Gaslink were seconded in 2011 to work fulltime as members of the European Network for Transmission System Operators for Gas (ENTSOG) team. Based in Brussels, they worked on developing codes in 2012 and continue to assist Gaslink to represent Irish interests in Europe. These employees will continue their work in Europe during 2013.

## THE FUTURE FOR GASLINK

Although there may be changes to the gas industry regulatory framework, Gaslink will continue to operate during 2013. 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 system. This role will continue in 2013.

## ACKNOWLEDGEMENTS

Firstly, 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 (DCENR) and the office of the Commission for Energy Regulation (CER) for their ongoing support and advice. 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.

**Brendan Fehily**  
Chairman, Gaslink

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# GENERAL MANAGER'S REPORT

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2012 WAS A YEAR OF SIGNIFICANT PROGRESS FOR THE NATURAL GAS MARKET, BOTH IN IRELAND AND IN EUROPE.



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In Ireland the final phase of construction of the Corrib project, which involves 4.9km of tunnelling, commenced at Aughose Co. Mayo, with the delivery of gas expected by the end of 2015. Construction commenced on a 46.5km connection to supply gas to SSE (Scottish and Southern Energy) formerly owned by Endesa, in Great Island in Wexford. Two new towns, Cootehill in Cavan and Wexford Town were added to the network; and 53,541GWh of natural gas was transported through the network during the year.

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Competition was further enhanced during 2012 with the addition of another supplier entering the pre-payment metering market. In the retail sector 107,000 domestic customers switched providers during 2012, similar to the number of 109,000 customers who switched in 2011. The overall domestic market as at December 2012 was circa 631,000 domestic customers.

In Europe, Gaslink continued to represent Ireland's interests as progress was made towards a more harmonised European energy market. Significant advances were made in the development of the necessary guidelines and codes to achieve this. Gaslink also provided input into the International Energy Agency's review of Ireland's energy policy. We highlighted our view that natural gas plays and will continue to play a critical role in the Irish economy and that Ireland's energy policy, including that pertaining to renewable energy, should reflect this.

## DEVELOPMENTS IN IRELAND

### New Sources of Gas

Preparation for the arrival of Corrib gas into the network continued at pace during 2012. Gaslink worked closely with the Corrib Partners throughout the year, receiving regular updates on the progress being made.

The remaining 8.3km of the onshore pipeline section is in the final phase of construction, of which 4.9km will be installed in a tunnel running under Sruwaddacon Bay in North Mayo. After 18 months of preparatory works, tunnelling commenced in December 2012. First gas from the Corrib gas field is likely to flow at the end 2014/early 2015, with Corrib expected to deliver up to 60% of Ireland's natural gas needs at peak production.

### Connecting New Towns to the Network

We were pleased to announce that Gaslink had received approval from the Commission for Energy Regulation (CER) to connect Cootehill in Co Cavan and Wexford town to the natural gas network. The approval for the connection of both towns was subject to Bord Gáis Networks securing the relevant anchor gas load in each town. It is anticipated that construction on both projects will commence in 2013.

### New Wholesale Gas Connection

Following the sale of Endesa Ireland's assets to Scottish and Southern Energy (SSE) in 2012, Gaslink continued to manage the progression of the gas connection to supply SSE's CCGT (Combined Cycle Gas Turbine) at Great Island, Co. Wexford. Following a successful planning application process with An Bord Pleanála, construction on the 46.5km 400mm high pressure steel line commenced in September 2012. Gaslink has built a very constructive working relationship with SSE and is committed to delivering gas to the site in-line with SSE's requirements.

### Gas Usage

During 2012, 53,541GWh of natural gas was transported through the network, a decrease of approximately 2.2% on 2011. Demand continues to be dominated by the power generation sector accounting for approximately 58% of all gas transported and natural gas was the fuel used to generate 55% of electricity in Ireland in 2012. The decrease in total gas transported from 2011 to 2012 can be partially attributed to reduced power generation gas demand.



*Pictured from left: Jennifer Kingston, Administrator, Gaslink and Mark Martin, Financial Analyst*

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**2012 WAS A SIGNIFICANT YEAR IN TERMS OF PROGRESSING THE EU'S THIRD GAS PACKAGE WHICH AIMS TO LIBERALISE THE GAS MARKET ACROSS ALL MEMBER STATES AND TO DEVELOP A SINGLE EUROPEAN GAS MARKET.**

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### **Demand, Supply and Capacity**

In July 2012, Gaslink published the Network Development Statement (NDS), covering the ten year period from 2011/12 to 2020/21. The NDS examines future demand, likely sources of supply and the capacity of the system to meet demand.

Every year, Gaslink also issues a Winter Outlook Report which sets out Gaslink's analysis and views of the adequacy of the gas network for the coming winter. Ireland's gas supply position is dependent on both the supply of gas and on the system's ability to transport the gas to the end user.

### **DEVELOPMENTS IN EUROPE**

2012 was a significant year in terms of progressing the EU's Third Gas Package which aims to liberalise the gas market across all Member States and to develop a single European gas market. This in turn will reduce the costs of transporting gas across Europe, promote competition and improve security of supply.

### **Development of Framework for Single European Market**

For all Member States, the enactment of the Third Gas Package is highly complex. It requires both the regulators – through the Agency for the Cooperation of Energy Regulators (ACER) – and operators – through the European Network of Transmission System Operators for Gas (ENTSOG) – in each market to agree framework guidelines and network codes in order to ensure the smooth transition from multiple gas markets to a single gas market.

Due to Ireland's location on the most westerly tip of Europe and our relatively small scale, it is essential that the policies and codes being developed are to the benefit of the Irish market. Gaslink is centrally involved in representing Ireland's market arrangements and interests and, during 2012, actively participated in the ENTSOG code development process.

The most advanced code developments relate to Capacity Allocation (how space in the pipeline is booked at points between neighbouring states); Congestion Management (how situations where there is no capacity available to book in the pipeline between neighbouring systems is managed) and Balancing (required to ensure gas inputs to a system equal the amount of gas withdrawn from the system). Also, although at a relatively early stage, the tariffing code development process (how the new harmonised products will be priced) gathered momentum in 2012. In participating in the development of the network codes, Gaslink makes strong representations to advance Irish gas interests.

In Ireland Gaslink continued to work closely with Bord Gáis Networks to unbundle the Irish gas structure. During this transition period, Gaslink's priority is to fulfil our obligations and responsibilities as the system operator and to minimise the impact on market participants, as Ireland fully enacts the European Third Gas Package.

In 2012 Gaslink successfully developed and implemented arrangements to fully address the infringement notices issued by the European Commission to Ireland in 2011, in relation to the Second EU Energy Directive.





Picture: Tunnel boring machine in the shaft; Corrib Gas Project

### Outlook

Gaslink's role is to continue to operate Ireland's gas transmission system safely, efficiently and without discrimination and to enhance competition in the gas market. 2013 will see further progress towards a single European Gas Market facilitated by the further development and implementation of the ENTSOG codes.

By the end of 2013, the Corrib tunnelling project under Sruwaddacon Bay is likely to be nearing completion. It is also anticipated that the pipeline to Scottish and Southern Energy's (SSE) power generation station in Wexford will be technically completed. We also anticipate that construction works to connect Cootehill in Cavan and Wexford town to the gas network will commence during 2013.

### ACKNOWLEDGEMENTS

2012 was again a very demanding year, particularly as activities in relation to the development of the European gas market accelerated. This required a significant amount of dedication and I am very grateful to our staff and management for their efforts and commitment regarding this. 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

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# BOARD OF DIRECTORS PROFILE

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**Brendan Fehily** *Chairman*



**Aidan O'Sullivan** *General Manager*



**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. 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 34 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 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.

### **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 (HR) management, primarily in the Information Technology sector working with multinational 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 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.

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# MANAGEMENT TEAM PROFILE

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*Aidan O'Sullivan* General Manager



*Caroline Greene*



*Avian Egan*



*Celine Hayes*



*Brian Murphy*



*Mark Martin*



The Gaslink Management Team is led by Aidan O'Sullivan, General Manager (profile details on page 10).

## CAROLINE GREENE

### **New Connection & Entry Point Arrangements Manager**

Caroline joined Gaslink in 2008 having joined Bord Gáis in 2001. Caroline holds a Bachelor of Engineering from University College Dublin and also holds a Master of Engineering Science from University College Cork. Caroline has 12 years' experience in the gas industry and previously worked in several engineering roles throughout Bord Gáis, encompassing design and operations of transmission pipelines and Above Ground Installations; pipeline integrity and safety. Caroline is responsible for managing the contractual arrangements for new connections and entry points on the transmission system. She is also responsible for Ireland's Natural Gas Emergency Plan.

## 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. Avian previously worked in management positions within LogicaCMG, Microsoft and ALPS Electric Ireland.

## CELINE HAYES

### **Manager of Transportation Projects**

Celine joined Gaslink in 2007, having joined Bord Gáis in 2004. She is a graduate of University College Dublin and holds a Bachelor of Engineering and Master of Management Science degrees. Celine has 9 years' experience in the gas industry and previously worked as a manager within management consultancy and software development organisations.

## BRIAN MURPHY

### **Regulatory Analyst**

Brian Murphy joined Gaslink in 2008 and is a graduate of University College Cork, with a B.A. in Economics and holds a Masters in Business Studies through Dublin Business School. Brian initially worked within the Regulatory Affairs Department for Gaslink, and then moved to New Connections, Trading and Settlements, and Revenue Reporting functions. Prior to joining Gaslink, Brian worked for HP Financial Services and GE Capital Woodchester within the area of risk management.

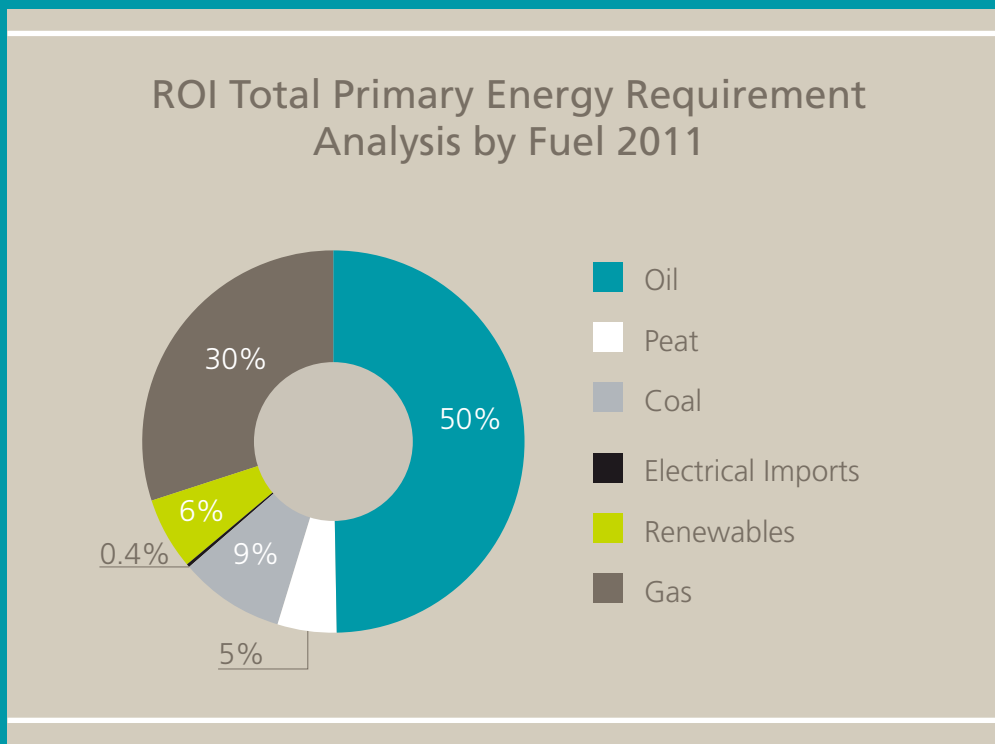
## MARK MARTIN

### **Financial Analyst**

Mark joined Gaslink in 2012. He is a member of the Institute of Certified Public Accountants in Ireland. Mark has previously been responsible for managing a finance team in St. John of God, a large Health Service Executive organisation. He also has experience working as an accountant in Australia with an SME company.

# 1. GASLINK'S ROLE IN IRELAND

As the licence holder to operate the transmission and distribution system in Ireland, it is Gaslink's role to promote an open and competitive market in Ireland. This is in line with European energy policy which aims to liberalise the gas market across Europe. As the Independent System Operator (ISO) since 2008, Gaslink ensures that the system is operated, maintained and developed in a safe and efficient manner.





Gaslink, in conjunction with the relevant regulatory authorities and industry, is responsible for developing and maintaining the strategy for the Irish natural gas wholesale and retail markets. 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 driving role in the development of market arrangements to meet with industry best practice.

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.

Gaslink coordinates industry meetings at both wholesale and retail levels. There are currently 18 companies who are licensed 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 both 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 Commission for Energy Regulation (CER)
- Gaslink (ISO)
- Bord Gáis Networks
- Gas Shippers and Suppliers
- End-Users / Customers
- Producers

In 2012, the International Energy Agency (IEA) published its latest review of Ireland's energy policy. Having been provided with significant input from Gaslink in 2012, the DCENR fed into the International Energy Agency (IEA) for their review. Within its review of the gas sector in Ireland, the IEA focussed on many of the areas that Gaslink has been prominent in since its establishment, including:

- Liquefied Natural Gas (LNG)
- Gas storage
- Emergency response measures
- The unbundling requirements of the 3rd Directive
- Common Arrangements for Gas (CAG)

Gaslink is centrally involved in LNG and gas storage projects currently underway in Ireland that will partly alleviate security of supply concerns once completed. To date, Gaslink has played a key role in the CAG project and the IEA stresses that it anticipates that a successful implementation of this project has the potential to bring benefits to both regions in terms of security of supply and cost reductions through increased competition. 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 (ROI) 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 fuel and provides the most efficient form of fuel in heat and electricity generation. Gas accounted for 30% of the ROI annual primary energy demand in 2011. 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 2009 Renewable Energy Directive (2009/28/EC) gave Ireland an overall target of 16% of total final energy consumption to come from renewable energy by 2020. Efficient gas power stations will be required to address this challenge as back-up to wind power generation, and hence gas will play a key role in Ireland's energy mix in the coming decades.

Furthermore, the versatility of natural gas is such that it also has substantial potential as a fuel for transport. The use of compressed natural gas (CNG) is growing worldwide with an estimated 14 million natural gas vehicles (NGVs) currently in operation globally. Natural gas as a transport fuel has a number of benefits including being a lower cost fuel, 30% to 60% lower than traditional petrol/diesel fuels, while also having lower vehicle emissions. Furthermore, it provides a pathway to a renewable fuel source as renewable gas can also be used in NGVs. A further benefit is increased security of supply given that 99% of Ireland's transport is dependent on oil.

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## 2. GASLINK'S ROLE IN EUROPE

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The liberalisation of the European Gas market continued to progress throughout 2012. European legislation passed in 2009, referred to as 'The Third Gas Package', was introduced to facilitate the development of a single European gas market. The ultimate aim of this single market is to reduce the costs of transporting gas across Europe to promote competition and to improve security of supply.

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*Pictured (from left): Aidan O'Sullivan, General Manager, Gaslink; Nigel Sisman, Business Area Manager, ENTSOG*





*Pictured (from left): Ann-Marie Colbert, Advisor, ENTSOG (seconded from Gaslink); Noel Regan, Advisor, ENTSOG (seconded from Gaslink); Brendan O’Riordan, Commercial Analyst, Bord Gáis Networks; Brian Murphy, Regulatory Analyst, Gaslink*

In order to integrate the many Member States participating within the EU into a single market, a number of key initiatives are underway to co-ordinate the roll-out and implementation of the European Commission’s vision for market integration. A representative body of regulators from across Europe has been established - Agency for Cooperation of Energy Regulation (ACER) as was a similar group for the transmission system operators – European Network of Transmission System Operators for Gas (ENTSOG).

Gaslink, as the Irish Transmission System Operator (TSO), represents Ireland as a member of ENTSOG, along with TSOs from 21 other Member States. ENTSOG’s primary role is the development of a range of 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. ENTSOG and ACER endeavour to reach agreement on the content of each code ahead of final approval by the EC once drafted. These Network Codes will be mandatory to implement in all Member States, including Ireland, and Gaslink participates in the ENTSOG workgroups specific to each Code. Furthermore, Gaslink has two employees, Ann-Marie Colbert and Noel Regan, seconded to ENTSOG for a three year period that commenced in 2011.

## EUROPEAN NETWORK CODE CHANGES

In 2012 a number of codes progressed towards final agreement and submission to the EC. These included codes relating to Capacity (allocation mechanism, and congestion management) and Gas Balancing (where gas inputs to a network system must equal gas withdrawals from that system). Also, 2012 saw further progress in the development of an interoperability code. 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)

In September 2012 ENTSOG submitted the finalised Capacity Allocation Mechanism Network Code (CAM NC) to ACER and the European Commission. It is anticipated that agreement will be reached between ENTSOG, ACER and the EC with a potential implementation date of Q1, 2015. Gaslink is actively involved in the development of this Code, ensuring that Irish interests at the interconnection points between Ireland, Great Britain and Northern Ireland are represented.

## Congestion Management

Congestion Management relates to where there is insufficient space in the gas pipelines to facilitate industry’s requirements to flow gas. The formal EC approval process (Comitology) was completed in 2012. Gaslink will be responsible for the implementation of these procedures in Ireland and will be required to do so in the Code of Operations by October 2013. Gaslink and National Grid continue to meet the Regulatory Authorities to determine the potential impact of European codes at Moffat.



*Pictured from left: Aidan Hogan; Market Arrangements Analyst and Aine O'Rourke; Personal Assistant to General Manager of Gaslink*

### Balancing

Throughout 2012 ENTSOG worked to develop a Network Code on gas 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 it is anticipated that ACER and ENTSOG will reach agreement on the Code by early Summer 2013. The Code will then advance to the European Commission for approval. Gaslink has been actively involved in the development of this Code as a member of the ENTSOG work group on Balancing.

### Tariffs

ACER issued draft framework guidelines (FG) on rules regarding harmonised transmission tariff structures in September, 2012. ENTSOG's response to the ACER's consultation on the tariff FG was submitted in November 2012. The Commission has requested more work to be carried out on the cost allocation/reference price determination section of the tariff FG and will allow a delay of a number of months to enable ACER to complete this work. It is likely that a second consultation will be carried out to get stakeholder views on the extended scope. ACER will deliver a final tariff FG in Q4, 2013.

### Interoperability

In September 2012 the EC invited ENTSOG to develop the Interoperability and Data Exchange Network Code, with a delivery date of September 2013. The objective of this code is to harmonise rules in order to eliminate barriers to cross-border trade and so promote efficient gas trading and transport within the EU. Throughout 2012, Gaslink worked with ENTSOG and adjacent TSOs on the development of this Network Code.

GASLINK WORKED CLOSELY WITH THE EC THROUGHOUT 2012 IN COMPLETING ITS EVALUATION PROCESS OF THE POTENTIAL PROJECTS OF COMMON INTEREST. IT IS EXPECTED THAT THE EVALUATION OF THE PCI WILL BE FINALISED IN JULY 2013, WHERE IT IS EXPECTED THAT 50 GAS RELATED PROJECTS WILL BE GRANTED PCI STATUS.

### Infrastructure and Security of Supply European Developments

#### Infrastructure

In 2012 Gaslink submitted expressions of significance to the EC for Projects of Common Interest (PCI) which were deemed to meet the criteria set out in the draft Regulation "Guidelines for Trans-European Energy Infrastructure". Each of the PCIs that Gaslink has identified has significant cross border impact between Ireland and the United Kingdom. Effectively, Gaslink is endeavouring to further develop regional gas market integration between Ireland, the United Kingdom (Great Britain, Northern Ireland and Isle of Man) and Europe.

Gaslink worked closely with the EC throughout 2012 in completing its evaluation process of the potential PCIs. It is expected that the evaluation of the potential PCIs will be finalised in July 2013, where it is expected that 50 gas related projects will be granted PCI status.

#### 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 2012, 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 2013/14.



**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 2012. 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 2012.

#### *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.

The infringements related 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).

In early 2012 the Regulatory Authorities in ROI and NI declared Gormanston as the Relevant Point on the South-North Pipeline. Following this declaration the Gaslink Code of Operations was modified to introduce commercial arrangements on the South-North Pipeline. These included physical forward flow into Northern Ireland and virtual reverse flow from Northern Ireland. Virtual reverse flow was introduced at Moffat thus satisfying the requirement to make maximum capacity available at the Moffat Entry Point. Both infringements have now been fully addressed.

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# 3. PROTECTING THE SAFETY OF THE NETWORK

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



*Denis Barry, Senior Asset Programme Manager, Bord Gáis Networks and Linda O'Brien, Community Liaison Officer, Bord Gáis Networks on site at the river crossing works on the Gas to Great Island Project.*



## 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
- 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

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 and distribution of natural gas. The Committee meets on a quarterly basis and comprises of representatives from Gaslink, the Commission for Energy Regulation, the Department of Communications Energy and Natural Resources and Bord Gáis Networks.

## FUTURE NETWORK DEVELOPMENT

### Forecasting Irish Demand/Supply Scenarios

On an annual basis, as part of its licence obligations, Gaslink publishes the Network Development Statement (NDS). This Report 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.

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; 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 NDS 2011/12 – 2020/21 forecasts that gas demand is anticipated to grow over the next ten years.

The annual power sector gas demand is expected to increase by 24% over the period to 2020/21 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 increasing carbon and coal prices. The annual industrial and commercial gas demand is forecast to grow by 17% by 2020/21 at an average growth rate of 1.7%. The majority of the growth is anticipated within the transmission connected industrial and 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 decline in new housing construction.



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**THE AIM OF THE NGEF IS TO PROTECT THE SAFETY OF THE GENERAL PUBLIC; PROTECT PROPERTY AND KEY INFRASTRUCTURE; AND MINIMISE DISRUPTION RESULTING FROM A GAS EMERGENCY.**

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The 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 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.

The 2011/12 to 2020/21 NDS is published on Gaslink's website at [www.gaslink.ie/publications](http://www.gaslink.ie/publications).

### **Joint Gas Capacity Statement (JGCS)**

The 'Common Arrangements for Gas (CAG)' is a project with the aim of progressing an All-Island gas market.

As part of the CAG project, regulatory authorities in both ROI and NI are committed to a single approach to security of supply on the island of Ireland 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 2012.

### **European Supply/Demand Balance**

After the publication of the Ten Year Network Development Plan (TYNDP) 2011-2020, ENTSOG decided to publish this ten-year plan on a biennial basis. Therefore, the next TYNDP will be published in Q1, 2013 and it will cover the period 2013-2022.

During 2012, ENTSOG worked closely with all participating Transmission System Operators (TSOs) addressing the topics of demand, supply, market integration, security of supply and infrastructure projects. ENTSOG also addressed the need for increased stakeholder participation in the TYNDP process and Stakeholder Joint Working Sessions were organised throughout 2012 to feed into the process.

### **Preparing for a Gas Shortage Emergency**

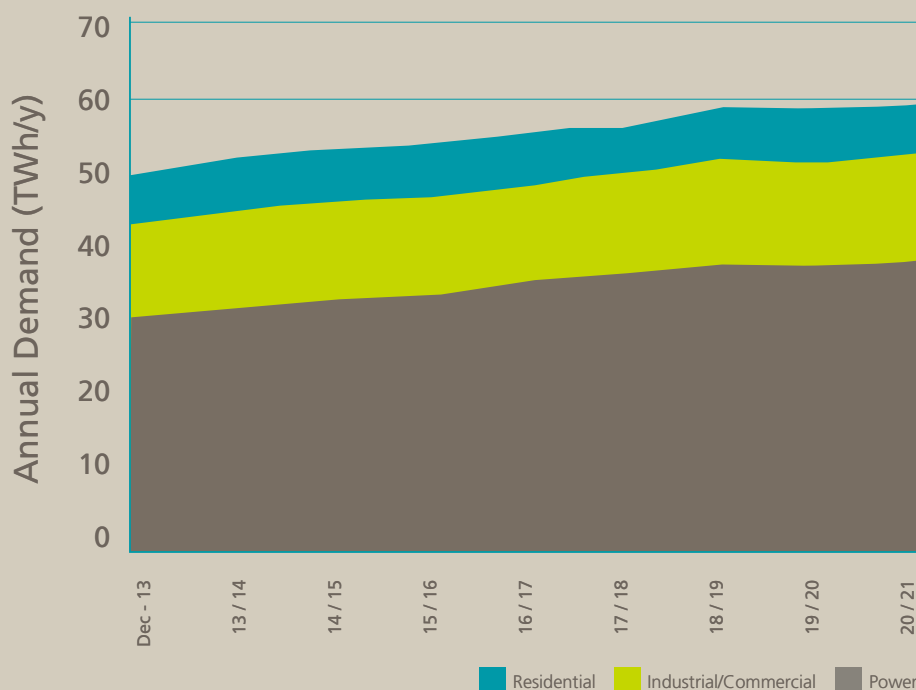
In December 2010, EU Regulation 994/2010 came into force. This Regulation sets out measures to safeguard security of gas supply and the Regulation puts many obligations on Member States to deal with a gas supply interruption. During 2012, Gaslink worked closely with Government, the CER and Bord Gáis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

- 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 year end in accordance with the Regulation's timeframe.

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 will progress a regional approach with the competent authority in the UK during 2013/14.

## Forecasted Demand by Sector



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.

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

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

In 2012 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 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 communication 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 this will be progressed during 2013/14.

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

The Task Force on Emergency Procedures (TFEP) was established in April 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 can have on the other.

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# 4. EXTENDING THE NETWORK

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



*Pictured (from left): Aidan O'Sullivan, General Manager, Gaslink; John Kilcoyne, Site Director, Abbott Ireland Nutrition, Cootehill; Mark Holohan, Sales Manager, Bord Gáis Networks; and Brendan Lynch, Engineering Manager, Abbott Ireland Nutrition, Cootehill*





*Pictured: Pipe string at River Barrow, Great Island, Co. Wexford*

### ADDING NEW TOWNS TO THE GAS NETWORK

In 2012 Gaslink received approval from the CER to connect Cootehill in Co. Cavan and Wexford Town to the network. The approval for the connection of both towns was subject to Bord Gáis Networks securing a relevant anchor gas load in each town. It is anticipated that construction on both projects will commence in 2013. 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 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 2012 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. Construction on the 46.5km 400mm high pressure steel line commenced in September 2012, following a successful planning application process with An Bord Pleanála. It is anticipated that the construction of this pipeline will be completed by Q3, 2013.



*Pictured: Gas feeder main connecting Macroom to the natural gas network*

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# 5. OPERATING IRELAND'S NATURAL GAS NETWORK

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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.

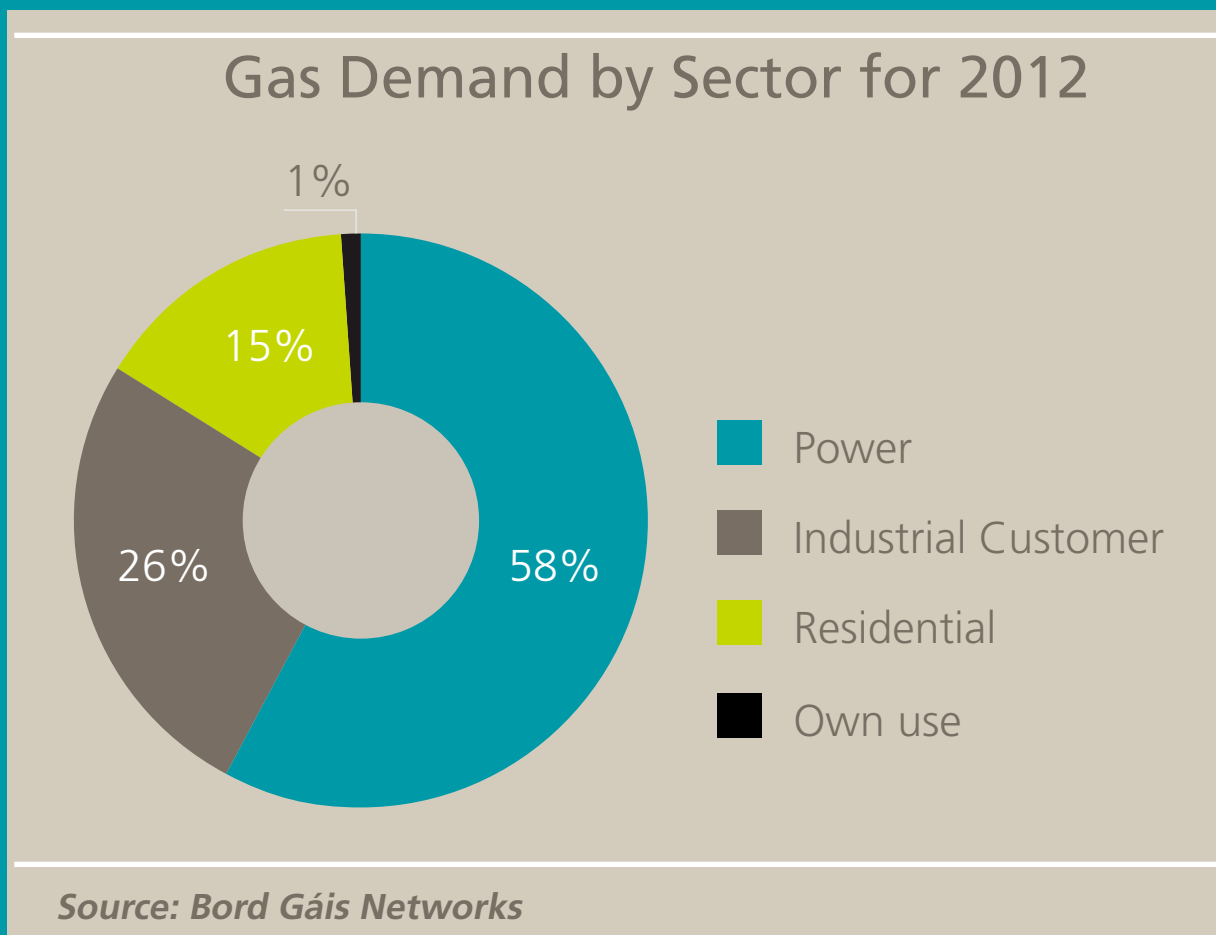
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*Kells, Co Meath.*



# 6. NATURAL GAS ENTERING THE IRISH NETWORK





**Pictured: Bellanboy Gas Terminal; Corrib Gas Project**

## THE NETWORK

At the end of 2012 Ireland's natural gas network comprised of 2,417km transmission (high pressure) pipelines, including two sub-sea interconnectors with the UK, and 11,131km of distribution (low pressure) pipelines, delivering gas to over 657,500 premises in over 160 towns and cities across the country.

## GAS DEMAND

During 2012, 53,541 GWh of natural gas was transported on the network over the year, a decrease of approximately 2.2% on 2011. The decrease in total gas transported from 2011 to 2012, 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 2012.

## GAS AND ELECTRICITY MARKETS

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

Gaslink, Bord Gáis Networks, the CER and Eirgrid worked together throughout 2012 to promote increased understanding and cooperation between the gas and electricity markets.

Gaslink and Bord Gáis Networks met with all Gaslink shippers in the powergen sector during 2012 with the aim of ensuring that appropriate contractual commitments and operational procedures exist between gas and electricity. The conclusions and recommendations from this review and from the joint Gaslink, Bord Gáis Networks, CER and Eirgrid review will be presented at a Gas and Electricity Interaction Workshop in 2013.

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.

## 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 and (4) a gas processing terminal.

In 2012 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 delivering up to 60% of Ireland's natural gas needs at peak production. Gaslink will be working closely with the Corrib Gas Partners to start Corrib Gas Terminal commissioning in 2014, in preparation for first gas from the Corrib Field, expected in late 2014/early 2015.

## MOFFAT

The Moffat Entry Point is of critical importance for securing Ireland's natural gas supply. Gaslink and National Grid carried out a market test for physical reverse flow at Moffat at the request of the regulatory authorities during 2011. The results of the market test indicated that currently there is no requirement for physical reverse flow at Moffat. Gaslink was granted an exemption by the CER from the requirement to introduce physical reverse flow in accordance with Article 7 of the Security of Supply Regulation in 2012.

## 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. Gaslink continues to engage with KEL regarding any expansion opportunities of the indigenous gas field and storage facility.

# 7. 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 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 enhanced during 2012, with the addition of another supplier entering the pre-payment metering market. The market assurance strategy and processes were revised to better service today's open and competitive Irish market. 107,000 domestic customers switched providers during 2012, similar to the number of 109,000 customers who switched in 2011. The overall domestic market as at December 2012 was circa 631,000 domestic customers.

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 2012 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.
- **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 2012 Gaslink provided regular industry updates on the European Network Code development process.
- **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. 2012 saw a further increase in the number of pre-payment meters and now over 69,000 domestic gas users have these meters installed. This

accounts for approximately 12% of the total domestic meter population. Over 50% of these meters were installed under the Financial Hardship Scheme, providing assistance to customers in financial difficulty.

- **Smart Metering** - The Commission for Energy Regulation published a Decision regarding smart metering in July, 2012. A decision was made to proceed to the requirements definition and procurement phase of the National Smart Metering Programme. Smart meters may be installed in Irish homes and businesses from 2016 initially, with all electricity and gas smart meters being rolled out by 2020. An initial assessment of the impact of smart metering on market facing processes was carried out during 2012. A more detailed cost-benefit analysis will be carried out in 2013, to assess the feasibility of installing smart gas meters for all residential customers.
- **Revenue Protection** – Gaslink, in conjunction with Bord Gáis Networks, has commenced the establishment of a Revenue Protection Unit. This Unit will aim to reduce the theft of gas and the tampering of meters. It will prioritise the safety of the general public and impress upon the public the danger accompanying gas theft and meter tampering. Gas theft quantification in terms of monetary impact is difficult to ascertain and our estimations are based on certain assumptions. However, our analysis indicates a rising trend in gas theft will result in customers paying more for their gas.





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