



IRELAND

KEY FIGURES			
OVERVIEW	3		
1. Energy Outlook	4		
2. Oil	5		
2.1 Market Features and Key Issues	5		
2.2 Oil supply infrastructure			
2.3 Decision-making Structure for Oil Emergencies			
2.4 Stocks	8		
3. Other Measures	11		
3.1 Demand Restraint	11		
3.2 Fuel Switching	11		
3.3 Others	12		
4. Natural Gas	12		
4.1 Market Features and Key Issues	12		
4.2 Natural gas supply infrastructure	14		
4.3 Emergency Policy for Natural Gas	16		

List of Figures

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Ireland

Key Oil Data

	1985	1990	1995	2000	2005	2008	2009	2010
Production (kb/d)	-	-	-	-	-	-	-	-
Demand (kb/d)	83.8	92.1	116.9	170.0	191.9	191.4	167.0	164.2
Motor gasoline	19.5	20.5	24.0	34.5	39.6	40.0	36.8	33.7
Gas/diesel oil	26.7	34.5	44.3	64.0	75.3	79.6	72.1	67.9
Residual fuel oil	21.1	16.9	23.9	31.7	23.0	13.1	7.3	7.8
Others	16.6	20.2	24.7	39.8	53.9	58.7	50.9	54.9
Net imports (kb/d)	83.8	92.1	116.9	170.0	191.9	191.4	167.0	164.2
Import dependency	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Refining capacity (kb/d)	56	56	53	71	71	71	71	72
Oil in TPES	46.2%	44.8%	49.3%	54.0%	53.8%	49.9%	50.3%	-

16000 14000 12000 thousand barrels 10000 8000 6000 4000 2000 0 JAN FEB MAR APR MAY JUN JUL AUG SEP ОСТ NOV DEC Range 2006 - 2010 2010 2011

End-Month Total Oil Stock Levels¹ - Five Year Range

Key Natural Gas Data

	1985	1990	1995	2000	2005	2008	2009	2010 *
Production (mcm/y)	2 468	2 318	2 778	1 186	572	438	391	388
Demand (mcm/y)	2 468	2 317	2 876	4 013	4 181	5 286	5 148	5 656
Transformation	1 672	1 041	1 309	2 132	2 391	3 2 7 7	3227	-
Industry	772	974	972	995	634	693	622	-
Residential	-	145	309	511	710	783	729	-
Others	24	157	286	375	446	533	570	-
Net imports (mcm/y)	-	- 1	98	2 827	3 609	4 848	4 757	5 268
Import dependency	0.0%	0.0%	3.4%	70.4%	86.3%	91.7%	92.4%	93.1%
Natural Gas in TPES	23.0%	18.7%	21.9%	25.1%	24.3%	30.1%	30.0%	-
** * ** ** * * *								

* based on monthly data submissions to the IEA.





1 - Primary oil stocks on national territory; these exclude utility stocks and including pipeline and entrepot stocks where known. 2 - Stocks held on national territory, as reported to the IEA in monthly data submissions.

OVERVIEW

Oil remains the dominant energy source in Ireland, representing 50% of the country's total primary energy supply (TPES) in 2009. Natural gas has taken a growing share – from 19% in 1990 to 30% in 2009. Irish oil demand peaked at 203 kb/d in 2006, and since then it gradually decreased to 167 kb/d in 2009. With no indigenous oil production, all crude oil is imported. In 2009, roughly 80% of crude oil was supplied from four OECD Europe countries, while more than 90% of refined products were imported from the United Kingdom.

Ireland meets its stockholding obligation to the IEA and the EU through a combination of 1) stocks owned by the National Oil Reserves Agency (NORA) and stored in Ireland and in other EU member states, 2) stocks held by NORA under short-term commercial contracts ("Stock Tickets") in Ireland and/or other EU member states, and 3) operational stocks held in Ireland by industry. The Administration has been pursuing a policy of rebalancing its emergency oil reserve by maximizing NORA's stocks held in Ireland, and NORA has been making efforts to achieve 80 days of physical stocks by 2012.

The use of stocks held by NORA is central to Ireland's emergency response policy, which would be complemented by demand restraint measures if a supply disruption were to become protracted. In the event of a major domestic supply disruption, NORA stocks would be allocated to marketing companies on the basis of their market share for the product or products concerned. In the event of a global supply disruption which would require a collective action by the IEA, NORA stocks would be made available to the market by tender and/or use of ticketed stocks held abroad. The Oil Supply Division of the Department of Communications, Energy and Natural Resources serves as Ireland's National Emergency Strategy Organisatin (NESO).

Largely driven by increased demand for electricity and construction of new gas-fired power stations, the demand for natural gas has steadily increased, reaching 5.1 bcm (14 mcm/d) in 2009. The United Kingdom is the single source of natural gas imports for Ireland. In 2009, Ireland imported approximately 4.6 bcm (13 mcm/d) of natural gas from the United Kingdom via two sub-sea interconnectors, which covered up to 90% of the total demand.

Diversification of supply, the encouragement of the development of commercial gas storage, the enhancement of emergency planning and response with partners in the United Kingdom and Northern Ireland, and the development with Northern Ireland of Common Arrangements for Gas (CAG) have all been the central parts of Ireland's overall policy on natural gas security.

As for fuel switching, one of the IEA emergency response measures, gas-fired power generators in Ireland are required to be able to conduct fuel switching. Base load gas-fired generators are required to hold five days of secondary fuel stocks on site and to be able to run at 90% output capacity for that period in a gas emergency, while mid-merit generating units are required to have three days of secondary fuel stocks on site and also to maintain a 90% output.

1. Energy Outlook

Oil remains the dominant energy source in Ireland, representing 50% of the country's total primary energy supply (TPES) in 2009. Natural gas has taken a growing share, from 19% in 1990 to 30% in 2009. In 2009, coal represented 15% of the country's TPES; this percentage has remained relatively stable over the past decade.

The Irish Administration foresees that TPES will increase from 14 Mtoe in 2009 to 18 Mtoe by 2020 and that the combined portions of oil and natural gas in TPES will continue to represent around 80% in the same year.



While coal used to be the most important fuel source for power generation, it has now been surpassed by natural gas, which represented some 58% of the generation mix in 2008.



Source: Energy Balances of OECD Countries, IEA

2. Oil

2.1 Market Features and Key Issues

Oil reserves and domestic production

There is no indigenous oil production in Ireland; all crude oil is imported.

Oil demand

Irish oil demand peaked at 203 kb/d in 2006, and since then it has gradually decreased to 167 kb/d in 2009.

Oil demand in the transport sector has increased from some 80 kb/d in 2000 to around 100 kb/d in 2009. The ratio of the transportation sector in the Irish total inland oil demand also increased, from 48% in 2000 to 60% in 2009. In terms of oil demand by product, demand for motor gasoline and diesel grew by 9% and 44%, respectively, in the period between 2000 and 2009.

The Irish Administration foresees that total oil consumption until 2020 will remain flat or somewhat less than the current level.

Oil Demand in 2009 (kb/d)						
LPG and Ethane	3					
Naphtha	-					
Gasoline	37					
Kerosene	34					
Diesel	49					
Heating/other Gasoil	23					
Residual Fuels	7					
Other Products	13					
Total Products 167						



Source: Monthly Oil Statistics, IEA

Imports/exports and import dependency

Ireland's oil imports in 2009 were 174 kb/d, consisting of 53 kb/d of crude oil and 121 kb/d of refined products. In 2009, roughly 80% of crude oil was supplied from three OECD European countries. Norway (42%) was the biggest supply source of crude oil, followed by Denmark (23%) and the United Kingdom (9%). Ireland imported more than 90% of refined products from the

IRELAND

United Kingdom in the same year. Conversely, in 2009 Ireland exported 18 kb/d of oil products (mainly fuel oil to OECD Europe, such as Norway and the United Kingdom). Therefore, the country's total net oil imports in 2009 were 157 kb/d.



Oil company operations

The total share of integrated oil companies stands at approximately 40%. Esso (ExxonMobil) and Texaco (Chevron) are only active in the retail sector, while ConocoPhillips, which owns the Whitegate refinery, is active in the wholesale and retail market. Other major integrated oil companies have withdrawn from Ireland because it is a relatively small market that is not easily supplied. The market is currently composed of Esso, Texaco, ConocoPhillips and seven independently-owned Irish oil importers.

2.2 Oil supply infrastructure



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Source: Monthly Oil Statistics, IEA

The only oil refinery in Ireland is operated by ConocoPhillips at Whitegate in County Cork. It has a distillation capacity of 75 kb/d. ConocoPhillips has a stream of planned investments for improving capacity, reliability and capability over the period up to 2014.

In 2009, the Whitegate refinery processed roughly 56 kb/d of crude oil; the overall capacity utilization rate was nearly 75%. In the same year, gas/diesel oil, gasoline and heavy fuel oil accounted for some 38%, 18% and 30%, respectively, of the refinery's total product yield.

The Whitegate refinery was put up for sale by ConocoPhillips in early 2007, but the sale was cancelled in November of the same year. ConocoPhillips agreed to maintain the refinery until 2016, but it is not certain if the company will continue its operation thereafter.

Ports and Pipelines

All oil requirements are based on sea-borne imports. There are eight ports in Ireland with oil terminals that can accept imported refined products for commercial distribution: Drogheda, Dublin, New Ross, Whitegate, Cork (Marina), Foynes, Limerick and Galway. Dublin Port is the biggest, through which 45% of the transport and heating fuels used in Ireland are imported. Dublin Port can handle larger-size cargoes than many other ports.

There is no oil pipeline infrastructure in Ireland. Domestic distribution is mainly by road. Ireland also does not have any cross-border pipelines for transportation of crude oil and oil products.



boundaries and names shown and the designations used on maps included in this publication do not imply official endorsement or acceptance by the IEA.

Storage capacity

Ireland's main storage facilities are located at the Whiddy Island oil terminal (Bantry, County Cork), the Whitegate oil refinery (County Cork), and oil company depots in Dublin Port, Cork, New Ross, Foynes, Drogheda, Limerick and Galway. Ireland's total storage capacity as of March 2009 was 18.8 million barrels (2 523 thousand tons).

Around 40% of Ireland's storage capacities exist at Bantry on Whiddy Island. ConocoPhillips possesses the oil storage facilities there, with a total capacity of 1 030 kt (some 7.6 mb), which can be used for all three categories of main products and crude storage. About half of the facilities on Whiddy Island are rented out and used by the Irish stockholding agency, NORA. Roughly 80% of the agency stocks in Ireland are stored on this island. As Whiddy Island has no pipeline connection to the mainland, in the event of a local or global oil supply disruption, NORA stocks would first have to be loaded onto vessels and shipped to one of the oil ports in Ireland.

2.3 Decision-making Structure for Oil Emergencies

The Minister for Communications, Energy and Natural Resources is responsible for Ireland's emergency response preparedness. The Oil Supply Division of the Department of Communications, Energy and Natural Resources (DCENR) serves as Ireland's NESO. The Deputy Secretary of the Department is head of the Irish NESO. In emergency situations, the Division works in close co-operation with NORA and the oil industry.

Under the Fuels Acts of 1971 and 1982, the minister is empowered to regulate the acquisition, supply, distribution or marketing of fuels, including petroleum products – if the government decides that an emergency situation warrants such action. Under the National Oil Reserves Agency Act 2007, the drawdown of NORA stocks may be authorised by way of a ministerial decision.

2.4 Stocks

Stockholding Structure

Ireland meets its stockholding obligation to the IEA and the EU primarily with stocks owned by NORA and stored in Ireland and in other EU Member States with whom Ireland has concluded a Bilateral Oil Stockholding Agreement. In addition, NORA has stocks under short-term commercial contracts ("Stock Tickets") in Ireland and/or other EU Member States with whom Ireland has concluded a Bilateral Oil Stockholding Agreement, with an option to purchase the oil in emergency circumstances during the period of the contract. Finally there are operational stocks held in Ireland by industry/large consumers, as in any IEA Member country.

Under the National Oil Reserves Agency Act 2007, NORA is responsible for ensuring that sufficient stocks are in place to meet the Irish stockholding obligation. The Minister for Communications, Energy and Natural Resources is required to keep NORA informed of the volume of oil stocks that NORA should maintain. NORA is not required by the Minister to hold all of the 90-day stocks itself because account is taken of the stocks held by industry.

Oil importers have no stockholding obligations and the requirement that industry hold "prudent levels of stocks" was revoked when the NORA Act 2007 was brought into force. However, the

Government has powers under Fuels Control of Supplies Acts 1971 and 1982 to authorize the Minister by Order, in the event of an emergency, to control the acquisition, supply, distribution and marketing of fuels.

Crude or Products

NORA may hold its stocks in either crude oil or products, or as a combination of both. NORA holds all compulsory stock obligations in the form of finished products. At the end of 2009, roughly 90% of the public stocks in Ireland were middle distillates, while the remainder was motor gasoline. At the same time, about 80% of the public stocks held abroad were middle distillates, while the remaining 20% was motor gasoline.



Location and Availability



Source: Monthly Oil Statistics, IEA

NORA is allowed to hold stocks in other EU member countries under Bilateral Oil Stocks Agreements in accordance with the NORA Act 2007. These stocks consist of stocks wholly-owned by NORA and "ticketed stocks". NORA arranges to have these stocks inspected from time to time. Ireland has bilateral agreements with Belgium, Denmark, France, the Netherlands, Sweden and the United Kingdom.

In line with the strategic goals set out in the government White Paper 2007, Ireland is

pursuing a policy of re-balancing the strategic oil reserve by increasing NORA's wholly-owned stocks of oil and the level of stocks held in the country, subject to increased storage availability and value-for-money considerations. Accordingly, NORA has embarked on a programme of increasing the amount of its wholly-owned stocks located in the country and procuring storage facilities, with the aim of meeting the EU 90-day stock requirement by way of 80 days of physical stocks and 10 days of stock tickets by the end of 2012.

Monitoring and Non-compliance

The Minister for Communications, Energy and Natural Resources receives detailed monthly statistical returns from oil supplying companies and large oil consumers engaged in direct imports of crude and products. Individual company data is cross-checked against returns by other companies and against import data provided by the Irish customs authorities.

In addition, the Department carries out regular audits to ensure the accuracy of statistical reporting.

Stock Drawdown and Timeframe

The use of stocks held by the stockholding agency NORA is central to Ireland's emergency response policy, which would be complemented by demand restraint measures if either an international or domestic supply disruption were to become protracted.

Under Section 35 of the NORA Act, the Minister for Communications, Energy and Natural Resources has the authority to release NORA's stocks in response to supply disruptions. This Section provides that after consultation with NORA, the Minister may issue a Direction specifying the procedures to be applied by NORA for releasing such oil stocks, and authorises NORA to release oil stocks in accordance with those procedures.

Each oil emergency situation must be assessed individually. However, it is expected that decisions for drawdown/release of NORA stocks would be made within a time frame of 24 to 48 hours.

In the event of a major domestic supply disruption, NORA stocks would be allocated to marketing companies on the basis of their market share for the product or products concerned. NORA stocks held in storage by oil companies within Ireland could be delivered into the market within 48 hours of a decision to draw down stocks, thereby supplementing available commercial stocks held by oil companies. Such stocks would be sold or loaned to the companies concerned. NORA would issue a contract to each company entitled to draw down stocks, specifying the terms and conditions for the release. Pricing would be based on a mechanism developed by NORA which would reflect the prevailing market prices.

In the event of a global supply disruption which would require a collective action by the IEA, NORA stocks would be made available to the market by tender and/or use of ticketed stocks held abroad. At such occasions, the Deputy Secretary of the Department would take a decision to draw down NORA stocks within 48 hours from the moment of the Notice of Activation under the Initial Contingency Response Plan (ICRP) of the IEA. Then the Department would obtain the relevant approval from the Minister. A tender process for release of NORA stocks is estimated to take one to two weeks from the time of placing the tender. The tender process will be informed by e-mail to interested oil companies.

As stock ticket contracts are generally from three months to one year, a decision to use stock tickets would be taken well in advance of the expiry of the relevant contracts. Ticketed stocks could be either traded or swapped abroad for stocks located nearer to Ireland.

Financing and Fees

NORA receives no funding from the government. The operational costs of NORA are financed by a levy of EUR 0.02 (two cents) per litre on sales of gasoline, kerosene, gas oil, diesel oil and fuel oils. Under the NORA Act, aviation fuels and marine bunkers are exempt from the NORA levy. The NORA levy is paid by oil marketing companies and oil consumers (oil consumers holding specified stock levels are however, exempt from the NORA levy). Having calculated the levy, the Department advises NORA of the amounts due from each company. NORA then invoices the oil companies, and where applicable, oil consumers directly for the moneys owed.

According to NORA's 2009 financial statement, its operating costs in that year were EUR 36.9 million, comprised of EUR 28.4 million of storage costs, EUR 4.3 million of stock ticket costs and EUR 4.1 million of other operating costs.

3. Other Measures

3.1 Demand Restraint

It is envisaged that demand restraint measures would be introduced incrementally because Ireland would be seeking to minimise the impact of major oil supply shortages initially through the drawdown of national oil reserves held by NORA.

Under the Fuels (Control of Supplies) Acts 1971 and 1982, the Government may make an Order authorising the Minister of Communications, Energy and Natural Resources to intervene whenever the Government is of the opinion that the "exigencies of the common good" necessitate the regulation or control of the acquisition, supply, distribution or marketing of fuels held by the oil industry. Once the Government Order is in place, the Minister is empowered to make an Order or Orders in respect of regulation of a certain fuel or fuels. It is estimated that it would take approximately 24 hours from the point of making the necessary Ministerial Order or Orders to implement demand restraint measures.

In times of oil supply constraints, cooperation of the public and industry in voluntarily reducing their oil requirements might be sought. Specific measures may also be introduced, depending on the severity of the oil supply disruption. The Minister would request support from other government Departments such as Justice and Transport, if required, to assist implementation of different aspects of the demand restraint measures. Orders under Fuels Acts 1971 and 1982 could also be used to prohibit the export of certain categories of oil from the country. Details of Ireland's demand restraint measures are set out in the Department's *Handbook on Oil Supply Disruptions*. Indicative demand restraint measures include:

- National speed limits to be reduced and enforced by An Garda Síochana (Police);
- Traffic restrictions in urban areas where adequate public transport exists;
- Alternate driving days for private motor vehicles; implementation by An Garda Síochana;
- Restrictions to petrol stations on the basis of general supply availability reduction levels;
- Imposition of minimum and maximum sale amounts;
- Common opening hours. Restricted opening hours for fuel sales;
- Designated pump islands at larger petrol stations for sole use of authorised emergency services and priority personnel only. Priority personnel will have preferential access at all other outlets; and
- Restrictions on deliveries to business/home-based tanks to follow general supply availability reduction levels.

3.2 Fuel Switching

Ireland's fuel switching capacity out of oil has decreased to a negligible level, as the country's reliance on oil, especially on Heavy Fuel Oil (HFO), for electricity generation has fallen in recent years, due to the increased use of gas. HFO and distillate oil made up a very small proportion of the fuel mix for electricity generation, approximately 3.1% and 0.1%, respectively, in 2009. This trend is expected to continue, and the use of oil in power generation will dwindle further in the near future. All of the country's HFO power-generating capacity is scheduled to be decommissioned by 2012, which will eliminate the ability to switch to natural gas in an oil supply disruption.

IRELAND



Source: Oil Information, IEA

3.3 Others

Given that Ireland has no indigenous oil production, surge production of oil is not considered as an emergency response measure in the country.

4. Natural Gas

4.1 Market Features and Key Issues

Gas reserves and domestic production

Indigenous gas production started in 1979 and peaked in the middle of the 1990s at 2.8 bcm. During the last decade, the country's gas production has significantly decreased. Ireland's natural gas production in 2009 was 391 mcm. Natural gas is produced in Kinsale, Ballycotton and Seven Heads fields in the North Celtic Sea Basin.

The Corrib gas field, located off the northwest coast of Ireland in the Atlantic Ocean is currently being developed and is expected to start commercial production in 2012/13. Gas production from the Corrib gas field is anticipated to meet 73% of the annual demand in 2012/13, or 41% of the demand of the coldest day, once every 50 years. Corrib has a production profile that is quite short and is expected to decline within 6 years of its commencement. Initial peak production of Corrib is forecast to be 9.5 mcm/d in 2012/13 but production is expected to decline to 4.2 mcm/d by 2018/19.

Gas demand

Demand for natural gas has risen by 45% over the last decade, from 3.5 bcm (9.7 mcm/d) in 1999 to 5.1 bcm (14 mcm/d) in 2009.

¹ Total Consumption (including refinery consumption), does not include international marine bunkers.

Irish annual gas demand contracted by -3.1% in 2008/09 with the largest reduction of -4.6% occurring in the Power Generation sector. The contraction in Ireland's gas demand can be attributed in part to the economic recession, which resulted in reduced electricity demand and thus lower gas demand from the power generation sector. Annual demand is forecast to decrease to 2006/7 levels by 2013/14 when demand is forecast to pick up. The power sector share of total gas demand has grown from 61.7% in 2002/03 to 65.8% in 2008/09. Power sector gas demand is expected to contract between 2009/10 and 2013/14, however, recovery is expected from 2014/15 growing to 15.7 mcm/d in 2018/19 which will be an increase of approximately 12% on the 2009 figure.

Irish peak day demand of natural gas grew by 5.5% in 2008/09 due to favourable fuel prices and colder weather.

Peak demand of electricity in 2008/09 was 227.5GWh/d and annual demand in 2008/09 was 54,734 GWh/Yr.



Source: Natural Gas Information, IEA

Gas imports

The United Kingdom is the single source of natural gas imports for Ireland. In 2009, the country imported approximately 4.6 bcm of natural gas from the United Kingdom via two sub-sea inter-connectors, which covered approximately 90% of total Irish annual demand.



Source: Natural Gas Information, IEA

Gas Company Operations

The Commission for Energy Regulation (CER), the independent regulator for the electricity and natural gas sectors in Ireland, is responsible for the regulation of the country's gas network and retail market. Bord Gáis Éireann (BGE), a state-owned body, holds the transmission and distribution system owner licences of the natural gas network. Gaslink is an independent subsidiary of BGE and holds both the Transmission System Operator (TSO) licence and Distribution System Operator (DSO) licence. Bord Gáis Networks (BGN) carries out day-to-day operations of the system on behalf of Gaslink.

In Ireland, all gas customers have been free to choose any licensed supplier since July 2007. Three licensed companies supply residential customers and eight licensed suppliers provide gas to industrial and commercial customers.



4.2 Natural gas supply infrastructure

Ports and Pipelines

There are two entry points for natural gas for Ireland: Inch entry point in County Cork and Moffat entry point in western Scotland. The Inch entry point connects the Kinsale Head and Seven Heads offshore gas fields and the Kinsale gas storage to the Irish onshore network. There is a compressor station in Midleton near Cork, which compresses the gas to flow north towards Dublin.

The Moffat entry point connects the UK national transmission system to the Irish high pressure transmission network, enabling Ireland to import natural gas from the United Kingdom. This interconnector system is comprised of two sub-sea pipelines between north of Dublin and Scotland (Interconnector 1 and 2), two compressor stations at Beattock and Brighouse Bay in Scotland, and the 110 km of onshore pipeline between Brighouse and Moffat. The Interconnector system's current capacity is 22.7 mcm/d.

The actual combined capacity of the sub sea interconnectors is 47.4 mcm/d providing the required compression is available from on-shore Scotland facilities. There is a sub-sea spur connection to the Isle of Man from Interconnector 2. An offtake station at Twynholm in Scotland, located en route to the Brighouse Bay compressor station, supplies gas from the United Kingdom to Northern Island through the Scotland-Northern Ireland Pipeline (SNIP).

The onshore transmission system of Ireland is comprised of a ring-main system between Dublin, Galway and Limerick, with cross-country pipelines connecting the ring-main system to Cork, Waterford, Dundalk and the Corrib Bellanaboy terminal in Mayo. In order for the Irish gas network to accommodate increasing gas demand on the island of Ireland, substantial investments have been made in recent years.

Ireland does not have any LNG facilities. Shannon LNG proposes to construct the country's first LNG terminal in the Shannon estuary located on the southwest coast of the island. This project has received full planning permission. In December 2009, the terminal developers received the relevant economic and safety approval from the Commission for Energy Regulation (CER) to construct a gas pipeline, which will connect the proposed LNG terminal to the national gas grid.

This project is expected to be developed on a phased basis. The facility is expected initially to have a maximum output of 10.7 mcm/d with output reaching 26.8 mcm/d at maximum production. Phase 1 of commercial operations is expected to commence in 2015/16. The LNG project has the potential to add diversity to Irish gas supplies.

When gas from the Corrib field, through the Bellanaboy entry point, and the Shannon LNG terminal come on stream, Bellanaboy and Shannon will be additional entry points of natural gas for the country. Gas flows from Corrib and Shannon LNG could significantly change the direction of flows on the country's transmission network.

Storage

Ireland has one gas storage facility off the south west coast at Kinsale. This facility has the capacity (depending on the levels of gas held in storage at any given time) to supply 48% of protected customers for up to 50 days, which equates to 10% of annual demand. The Kinsale facility currently has a working volume of circa 218 mcm, which is equivalent to approximately 4.2% of Ireland's annual gas consumption in 2009. It has a maximum withdrawal rate of 2.5 mcm/d and a maximum injection rate of 1.6 mcm/d. Gas imports from Great Britain are used to

refill the storage facility at Kinsale in addition to site production. The operator of the facility is currently examining the feasibility of developing additional storage at the site.

4.3 Emergency Policy for Natural Gas

Diversification of supply, the encouragement of the development of commercial gas storage, the enhancement of emergency planning and response with partners in Great Britain and notably Northern Ireland, and the development with Northern Ireland of the Common Arrangements for Gas (CAG) constitute the central parts of Ireland's policy on natural gas security.

The Commission for Energy Regulation (CER) has statutory responsibility for monitoring and ensuring security of natural gas supply in Ireland. Under the powers derived from Statutory Instrument 697/2007 the CER is authorised to appoint the National Gas Emergency Manager (NGEM) and approve the Natural Gas Emergency Plan (NGEP). Gaslink, the transmission system operator has been appointed as the NGEM, and is responsible for declaring a gas emergency and activating and implementing the provisions of the NGEP.

The Natural Gas Emergency Plan has been developed following extensive consultation with relevant stakeholders and is tested on an annual basis with Great Britain and Northern Ireland.

In the event that a natural gas emergency is declared by the NGEM, he will activate the NGEP. Action taken involves the NGEM convening the Gas Emergencies Response Team (GERT), which will be responsible for implementing the directions of the NGEM as part of the operational response. The GERT is comprised of representatives from Bord Gais Eireann (BGE), Eirgrid (Electricity TSO in Ireland), ESBNetworks (ESBN), CER, Department of Communications, Energy and Natural Resources (DCENR) and Gaslink. With the assistance of the GERT the NGEM will make ongoing assessments of the emergency and advise on action to be taken to respond to the crisis.

There are agreed protocols in place for managing a natural gas emergency. Actions to be taken as a first step to curtail gas supplies during an emergency include the NGEM instructing gas powered electricity generators to switch to alternative fuel (usually distillate oil) within 5 hours of the emergency being declared.

In the event that there is an escalation of the crisis or the NGEM assesses the balance between supply and demand to be inadequate, he will instruct large industrial users to cease using gas. This will enable the NGEM to maintain supplies to protected customers for as long as possible. If the crisis escalates further, load shedding for daily metered and non daily metered users will take place.

All Island Gas

Concerning the Common Arrangements for Gas (CAG) project, in April 2008, the two regulators (the Irish CER and the Utility Regulator of Northern Ireland) published a Memorandum of Understanding (MOU) on the development of the CAG project under the All-Island Energy Market Development Framework. In May 2010 the two Energy Ministers on the island agreed that the two regulators should progress the project which will require to be underpinned by legislation in both jurisdictions. The two regulators identified security of supply as one of the primary areas for harmonisation. As part of the project an All-Island Working Group was set up to establish coordinated procedures for managing a gas emergency on an all-island basis, as well as to harmonise security of supply standards.

Strategic Gas Stocks and Drawdown

Market suppliers are not mandated to hold strategic gas reserves in Ireland. In the event of a gas emergency, the operator of the Kinsale commercial storage facility would be required to release gas from its facility if instructed to do so by the National Gas Emergency Manager. The National Gas Emergency Manager would also instruct the operator to cease injection of gas into storage.



Source: Monthly Oil Statistics, IEA

Fuel Switching

The CER Secondary Fuelling Decision of 2009 imposes obligation on gas-fired generation in Ireland to have capability to switch to alternative fuel within five hours of an emergency being declared.

Base load gas-fired generators are required to hold five days of secondary fuel stocks on site and must be able to run at 90% output capacity for that period during a gas emergency.

Mid-merit generating units are required to hold three days of secondary fuel stocks on site and also to maintain a 90% output capacity for that period.

Gas powered generators who are unable to hold fuel stocks on site must ensure fuel stocks are located in close proximity to the plant with a dedicated fuel line and pumping facilities.

In a crisis, all gas-fired generation capacity would be required to switch to alternative fuel within five hours of the formal declaration of a gas emergency. The CER and the DCENR have been in discussion about emergency plans for disruptions, including the possibility of increasing the availability of strategic oil stocks for fuel switching in the event of a gas emergency, with the involvement of NORA in key locations.

² Demand used here is monthly gross inland deliveries (observed) as reported in the MOS.

Demand Restraint

In a gas supply emergency the NGEM has authority to instruct large users to shed load. Large industrial customers would be one of the first to be cut-off, after the power generation sector. The NGEM would instruct large users to reduce consumption or shed load in order to maintain supplies to protected customers for as long as possible. The CER has the legal powers to enforce load shedding, while EirGrid, the electricity transmission system operator, is responsible for implementing the load shedding plan which has been in place, and tested, for the last three decades. ESBNetwork's role in this process is crucial and has been tested on an ongoing basis with Eirgrid and annually with Great Britain and Northern Ireland.

Regional arrangements are also in place to respond to a gas supply emergency. In the case of a gas supply disruption originating in Great Britain, then Ireland, Northern Ireland and Great Britain will apply load shedding on a pro-rata basis. Households in each jurisdiction share equal priority, and gas supply will continue from Moffat until supplies to households in Great Britain cannot be maintained. Significant progress has been made between relevant parties on developing load shedding protocols between Ireland and Northern Ireland and Ireland (all island) and Great Britain.

The EU Regulation concerning measures to safeguard security of natural gas supplies will further enhance security of natural gas supply in Ireland and the EU. The overall aim of this legislation is to increase security of gas supply in the EU by ensuring each Member State has an adequate level of preparedness in terms of infrastructure, supply obligations and emergency response plans for a gas disruption.

INTERNATIONAL ENERGY AGENCY

The International Energy Agency (IEA), an autonomous agency, was established in November 1974. Its primary mandate was – and is – two-fold: to promote energy security amongst its member countries through collective response to physical disruptions in oil supply, and provide authoritative research and analysis on ways to ensure reliable, affordable and clean energy for its 28 member countries and beyond. The IEA carries out a comprehensive programme of energy co-operation among its member countries, each of which is obliged to hold oil stocks equivalent to 90 days of its net imports. The Agency's aims include the following objectives:

Secure member countries' access to reliable and ample supplies of all forms of energy; in particular, through maintaining effective emergency response capabilities in case of oil supply disruptions.

- Promote sustainable energy policies that spur economic growth and environmental protection in a global context – particularly in terms of reducing greenhouse-gas emissions that contribute to climate change.
 - Improve transparency of international markets through collection and analysis of energy data.
 - Support global collaboration on energy technology to secure future energy supplies and mitigate their environmental impact, including through improved energy efficiency and development and deployment of low-carbon technologies.
 - Find solutions to global energy challenges through engagement and dialogue with non-member countries, industry, international organisations and other stakeholders.

IEA member countries:

Australia

Austria

Belgium

Canada Czech Republic Denmark Finland France Germany Greece Hungary Ireland Italy Japan Korea (Republic of) Luxembourg Netherlands New Zealand Norway Poland Portugal Slovak Republic Spain Sweden Switzerland Turkey United Kingdom United States

> The European Commission also participates in the work of the IEA.

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