

The following member country profile is an excerpt from Chapter 4 of the publication Energy Supply Security 2014 and is not intended as a stand-alone publication.

CHAPTER 4: Emergency response systems of individual IEA countries

The ability of the International Energy Agency (IEA) to co-ordinate a swift and effective international response to an oil supply disruption stems from the strategic efforts of member countries to maintain a state of preparedness at the national level. Energy security is more than just oil, as the role of natural gas continues to increase in the energy balances of IEA countries. The most recently completed cycle of Emergency Response Reviews (ERRs) reflected this change by assessing, for the first time, the member countries' exposure to gas disruptions and their ability to respond to such crises. This chapter provides general profiles of the oil and natural gas infrastructure and emergency response mechanisms for 29 IEA member countries.

Each country profile is set out in the following sequence:

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Ireland

Key data

Table 4.13.1 Key oil data

	1990	2000	2005	2010	2011	2012	2018*
Production (kb/d)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Demand (kb/d)	92.1	170.0	191.9	161.4	143.2	133.2	132.2
<i>Motor gasoline</i>	20.5	34.5	39.6	34.3	30.6	27.8	-
<i>Gas/diesel oil</i>	34.5	64.0	75.3	69.1	64.4	64.0	-
<i>Residual fuel oil</i>	16.9	31.7	23.0	7.1	5.5	4.1	-
<i>Others</i>	20.2	39.8	53.9	51.0	42.6	37.3	-
Net imports (kb/d)	92.1	170.0	191.9	161.4	143.2	133.2	132.2
Import dependency (%)	100	100	100	100	100	100	100
Refining capacity (kb/d)	56.0	71.3	71.0	72.4	72.4	72.4	-
Oil in TPES** (%)	45	54	54	48	47	43	-

* Forecast.

** TPES data for 2012 are estimates.

Table 4.13.2 Key natural gas data

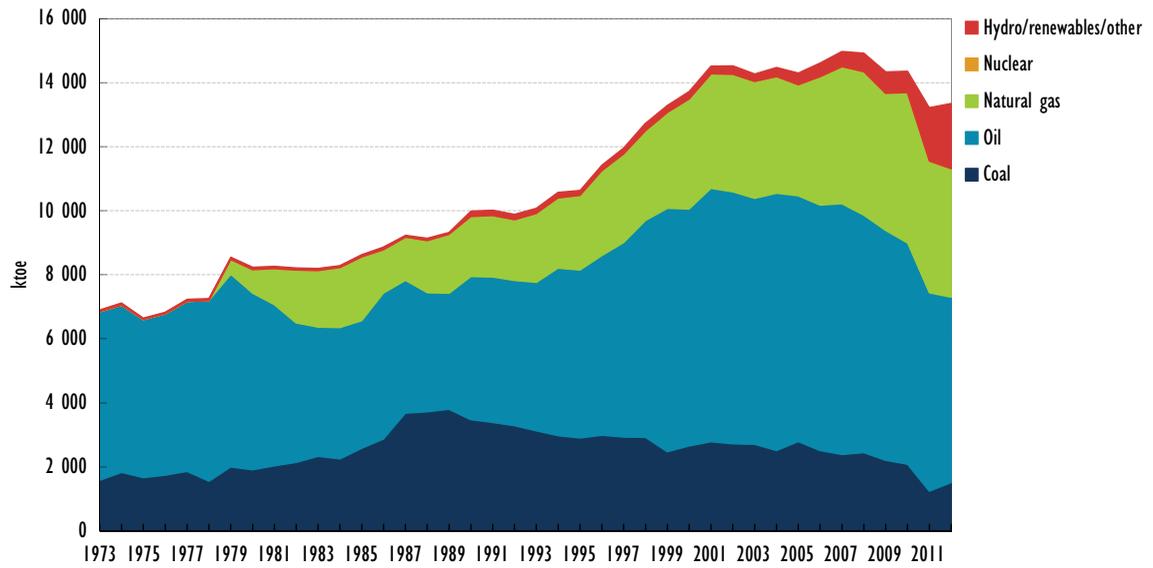
	1990	2000	2005	2010	2011	2012*	2018**
Production (mcm/y)	2 318	1 186	572	285	208	223	1 538
Demand (mcm/y)	2 317	4 013	4 117	5 503	4 836	4 735	4 519
<i>Transformation</i>	1 041	2 132	2 354	3 531	2 926	0	-
<i>Industry</i>	974	995	625	545	731	0	-
<i>Residential</i>	145	511	699	829	667	0	-
<i>Others</i>	157	375	439	598	512	0	-
Net imports (mcm/y)	- 1	2 827	3 545	5 218	4 628	4 512	2 981
Import dependency (%)	0	70.4	86.1	93.0	92.8	95.3	66
Natural gas in TPES (%)	19	25	24	33	31	30	-

* 2012 data are estimates.

** Forecast.

Note: This section on the emergency response systems of individual member countries was written by the IEA. All countries provided valuable information and comments. All opinions, errors and omissions are solely the responsibility of the IEA.

Figure 4.13.1 Total primary energy source (TPES) trend, 1973-2012



Map 4.13.1 Oil infrastructure of Ireland



This map is without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

Map 4.13.2 Gas infrastructure of Ireland



This map is without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

Country overview

Oil remains the dominant energy source in Ireland, representing 43% of the country's total primary energy supply (TPES) in 2012. Natural gas has taken a growing share of the energy mix – from 19% in 1990 to 30% in 2012. Irish oil demand peaked at 202 thousand barrels per day (kb/d) in 2006, and since then it decreased to 133 kb/d in 2012. With no indigenous oil production, all crude oil is imported. In 2012, roughly 80% of crude oil was supplied from Africa, the remaining 20% came from Norway, while more than 93% of refined products were imported from the United Kingdom.

Ireland meets its stockholding obligation to the International Energy Agency (IEA) and the European Union through a combination of stocks owned by the National Oil Reserves Agency (NORA) and stored in Ireland and in other EU member states, stocks held by NORA under short-term commercial contracts (“stock tickets”) in Ireland or other EU member states, and operational stocks held in Ireland by industry (in the case of the EU stockholding obligation, only stocks held by oil consumers that maintain more than 55 days of their previous year's consumption in oil stocks are counted). Ireland has been pursuing a policy of rebalancing its emergency oil reserves by maximising NORA's stocks held in Ireland, and NORA has been making efforts to achieve 88 days of physical stocks, in line with the new obligation set for NORA by the Minister for Energy in April 2013. NORA has also been progressively reducing the use of stock tickets with none being held as of September 2013 and all strategic stock being held as physical stock, either on the island of Ireland (71%) or abroad (29%).

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 offered for sale to oil import companies on the basis of the proportion of the NORA levy which each company has paid. These companies would then sell the products through their distribution chains into the market in the usual way. 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 or use of ticketed stocks held abroad. The Oil Security Division of the Department of Communications, Energy and Natural Resources serves as Ireland's national emergency strategy organisation (NESO).

Largely driven by increased demand for electricity and construction of new gas-fired power stations, the demand for natural gas had steadily increased, reaching 5.5 billion cubic metres (bcm) in 2010, but has declined since reaching 4.7 bcm in 2012. The United Kingdom is the single source of natural gas imports for Ireland. In 2012, Ireland imported approximately 4.4 bcm (11 million cubic metres per day) of natural gas from the United Kingdom via two sub-sea interconnectors, which covered up to 92% 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 of Common Arrangements for Gas (CAG) with Northern Ireland have all been central to Ireland's overall policy on natural gas security.

With regard to fuel switching, gas-fired power generators in Ireland are required to maintain some fuel-switching capacity. 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 natural gas emergency, whilst mid-merit generating units are required to have three days of secondary fuel stocks on site and also to maintain a 90% output.

Oil

Market features and key issues

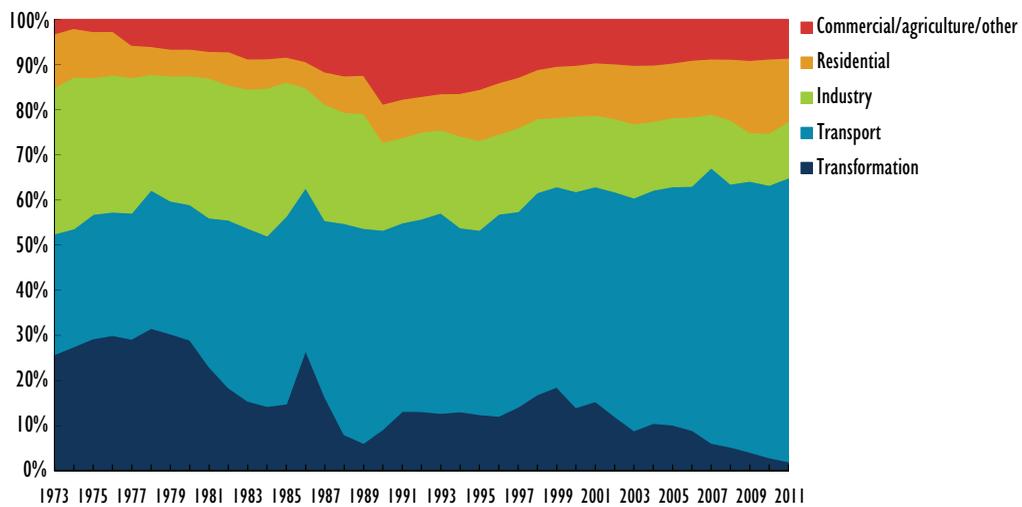
Domestic oil production

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

Oil demand

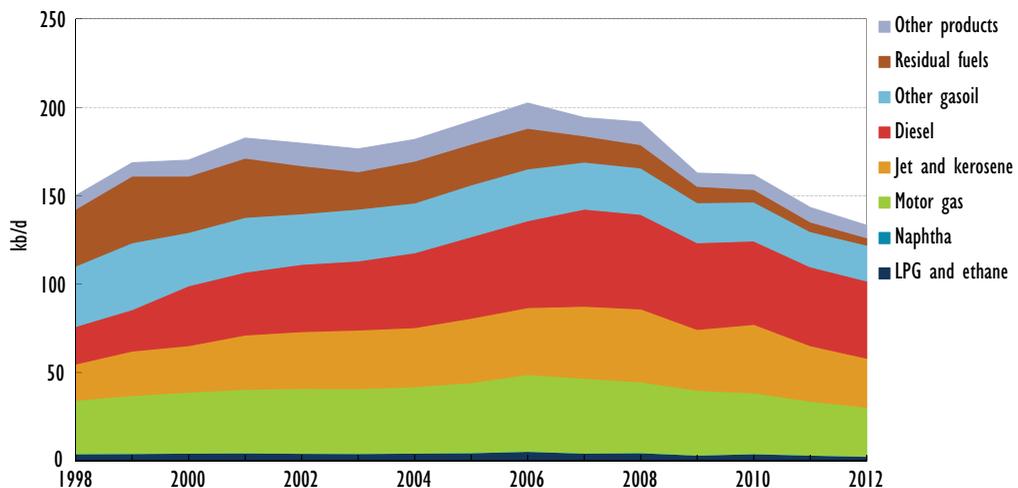
Irish oil demand peaked at 203 kb/d in 2006, and since then it has gradually decreased to 133 kb/d in 2012.

Figure 4.13.2 Oil consumption by sector, 1973-2011



Oil demand in the transport sector has increased from 3.9 million tonnes (Mt) in 2000 to around 4.2 Mt in 2011. The ratio of the transportation sector in the Irish total inland oil demand also increased, from 48% in 2000 to 63% in 2011. In terms of oil demand by product, demand for diesel grew by almost 30% in the period between 2000 and 2012.

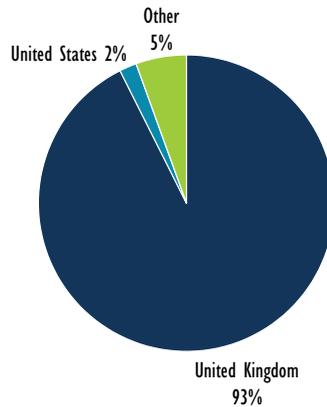
Figure 4.13.3 Oil demand by product, 1998-2012



Imports/exports and import dependency

Ireland's oil imports in 2012 were 168 kb/d, consisting of 59 kb/d of crude oil and 107 kb/d of refined products. In 2012, roughly 20% of crude oil was supplied from Norway, while the rest was mainly from Algeria and Nigeria. In the same year, Ireland imported more than 90% of its refined products from the United Kingdom. Conversely, in 2012 Ireland exported 34 kb/d of oil products (mainly fuel oil to the United Kingdom). Therefore, the country's total net oil imports in 2012 were 134 kb/d.

Figure 4.13.4 Oil products imports by origin, 1973-2012



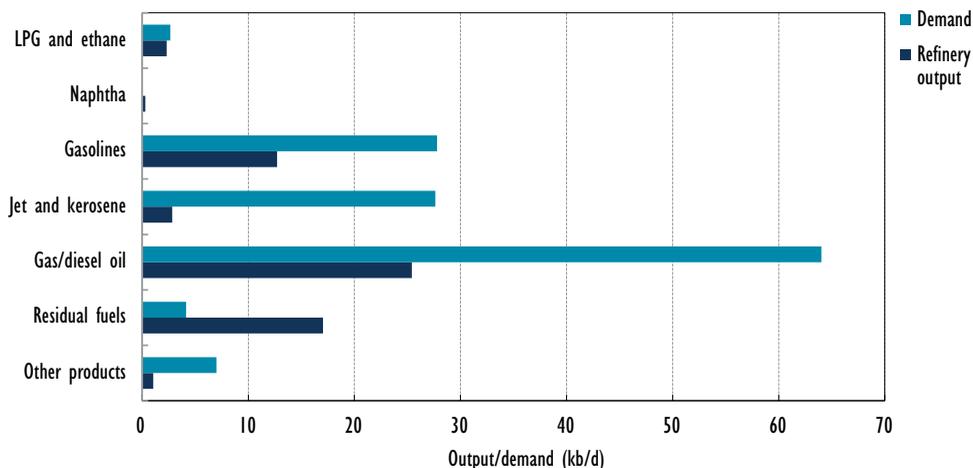
Oil supply infrastructure

Refining

The only oil refinery in Ireland is operated by Phillips 66 at Whitegate in County Cork. It has a distillation capacity of 75 kb/d. Its parallel company, ConocoPhillips, has a stream of planned investments for improving capacity, reliability and capability over the period up to 2014. In 2013, the refinery marketing activities and Bantry storage were put on the market for sale by Phillips 66. The sale process is ongoing and in the meantime Phillips 66 is committed to operating the refinery on a business-as-usual basis.

In 2012, the Whitegate refinery processed roughly 56 kb/d of crude oil; the overall capacity utilisation rate was nearly 85%. In the same year, gas/diesel oil, gasoline and heavy fuel oil accounted for 41%, 21% and 28%, respectively, of the refinery's total product yield.

Figure 4.13.5 Refining output vs. demand, 2012



Under the agreement of sale of the refinery by the state in 2001 with the private-sector owners, the refinery must remain operational until at least 2016. This is a requirement for Phillips 66 and any subsequent owners.

In July 2013, the Department of Communications, Energy and Natural Resources published a report entitled *Study of the Strategic Case for Oil Refining Requirements on the Island of Ireland*. The government's primary conclusion was that the presence of an operational refinery on the island of Ireland provides flexibility, enhancing the options available to the state in the event of an oil supply disruption by providing an alternative source of product and thus mitigating a complete reliance on product imports. It concludes that the continued operation of the Whitegate refinery on a commercial basis is highly desirable.

An additional finding of the study was that existing oil import facilities on the island of Ireland taken as a whole offer a robust infrastructure that would provide comfortable alternatives in the event of a serious disruption at any of the six principal oil ports. The study demonstrates that the improved motorway network and the robust capacity at Irish ports have enhanced oil security in recent years. Ireland will seek to deepen co-operation with counterparts in Northern Ireland to ensure the robustness of oil supply infrastructure on the island as a whole.

Ports and pipelines

All oil requirements are fulfilled by seaborne imports. The six ports in Ireland with oil terminals can accept imported refined products for commercial distribution: Dublin, New Ross, Whitegate, Cork (Marina), Foynes and Galway. Dublin Port is the largest and can handle larger cargoes than many other ports, receiving 45% of the transport and heating fuels used in Ireland.

There is no oil pipeline infrastructure in Ireland. Domestic distribution is mainly by road. Ireland also has no cross-border pipelines for transportation of crude oil or oil products.

Storage capacity

Ireland's main storage facilities are located at the Whiddy Island oil terminal (Bantry, County Cork), the Whitegate oil refinery (County Cork), Tarbert, Dublin and Kilroot (County Antrim) and oil company depots in Dublin Port, Cork, New Ross, Foynes and Galway.

A significant proportion of Ireland's storage capacity is at Bantry on Whiddy Island, with a total capacity of 1 030 kilotonnes (some 7.6 million barrels), 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 51% of the agency stocks in Ireland are stored on this island. In the event of a supply disruption, NORA stocks on Whiddy would first have to be loaded onto vessels and shipped to one of the oil ports in Ireland.

Decision-making structure

The Minister for Communications, Energy and Natural Resources (DCENR) is responsible for Ireland's emergency response preparedness. Its Oil Security Division serves as Ireland's NESO with the assistant secretary of the department serving as its head. In emergency situations, the division works in close co-operation with NORA and the oil industry and with the Irish Office of Emergency Planning, which plays an overall co-ordinating role during emergencies of all types.

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 and written instruction to NORA.

Stocks

Stockholding structure

Ireland meets its stockholding obligation to the IEA and the European Union primarily with stocks owned by NORA and stored in Ireland and in other EU member states with which Ireland has concluded an oil stockholding agreement.

Under the National Oil Reserves Agency Act 2007, NORA is responsible for ensuring that sufficient stocks are available to meet Ireland's stockholding obligations. The oil industry and large consumers also hold operational stocks in Ireland. Oil consumers that hold 55 days of their previous year's oil consumption in oil stocks may apply for an exemption from the NORA levy. These consumers' stock also counts towards Ireland's IEA and EU stockholding obligations. In addition, NORA has the option to obtain stocks under short-term commercial contracts ("stock tickets") in Ireland or other EU member states with which Ireland has concluded a bilateral oil stockholding agreement or memorandum of understanding (MoU), with an option to purchase the oil in emergency circumstances during the period of the contract. As a result of stock rebalancing in 2013, no such stock tickets are held and all Ireland's strategic oil stocks are held as physical stock.

Crude or products

At the end of 2012, roughly 76% of the domestically held NORA stocks were middle distillates, while the remainder was motor gasoline.

Location and availability

Stocks held abroad consist of stocks wholly owned by NORA. Ireland has bilateral agreements with the Netherlands, Sweden and Spain and MoUs with Denmark and the United Kingdom.

At the end of September 2013 NORA held 71% of total stocks in Ireland as physical stocks and 29% as physical stocks abroad with no stock tickets.

Monitoring and non-compliance

The Minister for Communications, Energy and Natural Resources receives detailed monthly statistical returns from oil companies. Individual company data is cross-checked against returns by other companies.

The department also 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 would be complemented by demand restraint measures if either an international or domestic supply disruption were to become protracted. The Minister for Communications, Energy and Natural Resources has the authority to authorise the release of NORA's stocks in response to supply disruptions. After consultation with NORA, the minister may issue a written

direction specifying the procedures to be applied by NORA for releasing such oil stocks, and authorising NORA to release oil stocks in accordance with those procedures.

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 sold by NORA to oil companies that pay the NORA levy, on the basis of the proportion of the levy that they pay. The oil companies would then sell the oil products through their distribution channels to the market in the usual way.

In the event of a global supply disruption requiring an IEA collective action, NORA stocks would be made available to the market by tender. In such an event, the assistant secretary for energy 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, if such option is pursued, is estimated to take from one to two weeks from the time of placing the tender.

Financing and fees

NORA receives no funding from the government. The operational costs of NORA are financed by a levy, which is currently 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 companies on their disposal of oil products.

According to NORA's 2012 financial statement, its operating costs in that year were EUR 35.7 million, comprised of EUR 31.6 million of storage costs and EUR 4.1 million of operating costs.

Other measures

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 emergency oil stocks 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.

Details of Ireland's demand restraint measures are set out in the department's *Handbook on Oil Supply Disruptions*. There are various indicative demand restraint measures:

- national speed limits to be reduced and enforced by *An Garda Síochána* (police)
- traffic restrictions in urban areas where adequate public transport exists
- alternate driving days for private motor vehicles, implementation by *An Garda Síochána*
- 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 services and users only, priority services and users will have preferential access at all other outlets
- restrictions on deliveries to business/home-based tanks to follow general supply availability reduction levels.

Fuel switching

Ireland's fuel-switching capacity out of oil has decreased to a negligible level, as the country's reliance on oil for electricity generation (1.2% in 2012), especially on heavy fuel oil (0.9% in 2012), has fallen in recent years because of the increased use of gas. This trend is expected to continue and the use of oil in power generation will dwindle further in the near future.

Other

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

Gas

Market features and key issues

Gas production and reserves

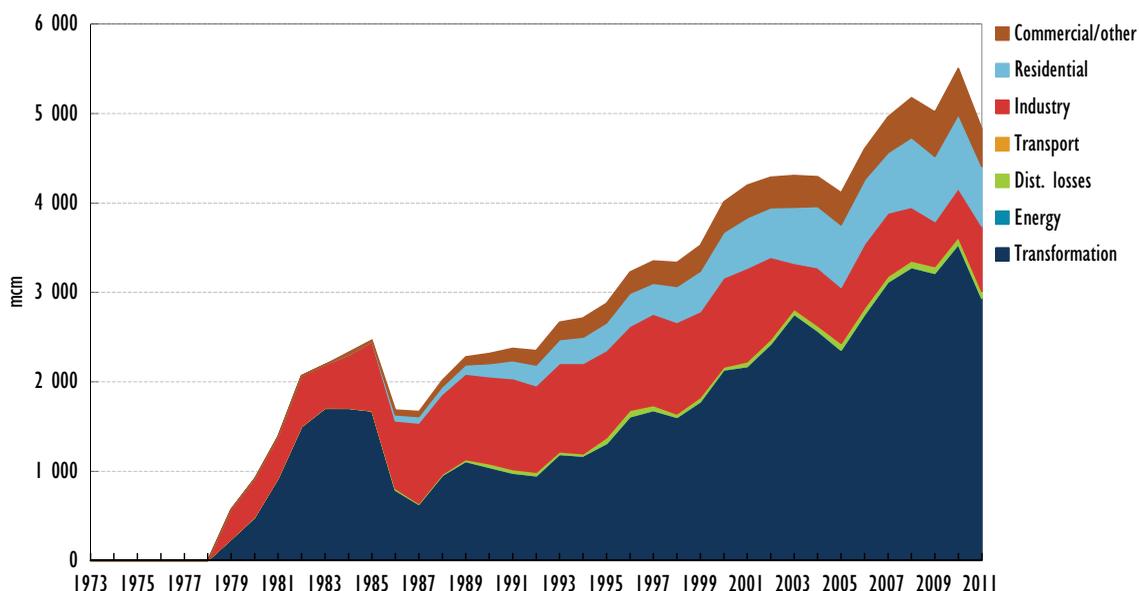
Indigenous gas production commenced in 1978 at the Kinsale Head gas field in the Celtic Sea, and brought ashore at the Inch entry point in County Cork. The Kinsale Head gas field was subsequently supplemented with production of gas from two satellite fields, the Ballycotton and South West Lobe (SWL) gas fields. The SWL gas field has since been depleted, and now operates as a seasonal gas storage facility. In 2003, the adjacent Seven Heads gas field was tied into the offshore Kinsale infrastructure, and Seven Heads gas was brought ashore at Inch. Production of gas from the Kinsale and Seven Heads gas field is now in decline, and is small relative to total demand; it is being superseded by the gas storage operation. In total, the Inch entry point provided 6% of Ireland's annual gas supplies and 10% of peak day gas supplies in 2012-13.

It is anticipated that the main source of future indigenous Irish gas production (in the short term) will be in the Corrib gas field. The gas field is currently being developed and is expected to start commercial production in 2015. Gas production from the field is expected to meet about 42% of annual demands over the first two years of operation. However, Corrib has a short production profile and is expected to decline within six years of its commencement. Ireland, therefore, is likely to remain dependent on gas imports from the United Kingdom in the medium term.

Gas demand

Ireland's current annual gas demand which stood at 4.7 bcm in 2012 (and peak day gas demand) has decreased from its peak in 2009-10 when it reached about 5.5 bcm. The decline in demand can be attributed to a downturn in Ireland's economy, and the increased generation of renewable electricity.

Figure 4.13.6 Natural gas consumption by sector, 1973–2011



According to gas consumption data for 2012-13, the electricity power generation sector accounted for 56% of annual gas demand, while the industrial and commercial sector and the residential sector accounted for 28% and 17% respectively.

In relation to peak day gas demand, the electricity power generation sector accounted for 56% of peak gas demand, the industrial/commercial sector for 23% and the residential sector for 21%.

Gas import dependency

The United Kingdom is the only source of natural gas imports into Ireland. In 2012, Ireland imported 4.5 bcm of natural gas from the United Kingdom, through two sub-sea interconnectors, which supplied approximately 94% of Ireland’s total annual gas demand. Following the depletion of the Corrib gas field, the majority of Ireland’s demand will continue to be met from UK imports through the Moffat entry point. However, this scenario could potentially change if the Shannon liquefied natural gas (LNG) terminal proceeds. A commercial decision is yet to be made regarding the project, which is otherwise well advanced.

Gas supply infrastructure

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 (with a technical capacity of 23.4 mscm/d) 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 made up of two sub-sea pipelines between the north of Dublin and Scotland

(Interconnector 1 has a capacity of 17 mcm/d and Interconnector 2 has a capacity of 23 mcm/d). There are also two compressor stations at Beattock and Brighthouse Bay in Scotland, and the 110 km onshore pipeline between Brighthouse and Moffat.

The actual combined capacity of the sub-sea interconnectors is 40 bcm but is limited to less than 23 mcm/d because of limited capacity at Brighthouse Bay. There is a sub-sea spur connection to the Isle of Man from Interconnector 2. An off-take station at Twynholm in Scotland, located en route to the Brighthouse Bay compressor station, supplies gas from the United Kingdom to Northern Ireland through the Scotland-Northern Ireland Pipeline (SNIP).

The onshore transmission system of Ireland is made up 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 Irish gas demand, substantial investments have been made in recent years.

Storage

Ireland has one gas storage facility off the southwest coast at Kinsale, which is operated on a commercial basis. 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 around 218 mcm, which is equivalent to approximately 5% of Ireland's annual gas consumption in 2012. It has a maximum withdrawal rate of 2.5 mcm/d and a maximum injection rate of 1.6 mcm/d. Gas imports from the United Kingdom 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.

Emergency policy

Diversifying supply, encouraging the development of commercial gas and LNG storage, enhancing emergency planning and response with partners in the United Kingdom and notably Northern Ireland 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). Gasink, 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.

Statutory Instrument 336/2013 set out the functions of the CER as the competent authority for the purposes of EU Regulation 994/2010. The functions of the competent authority include, among others, the appointment of authorised officers to assist in the response to and management of a gas supply emergency.

The NGEP was 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, the NGEM will then 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 Gáis Éireann (BGE), Eirgrid (the electricity TSO in Ireland), ESBNetworks (ESBN), the CER, the Department of Communications, Energy and Natural Resources (DCENR) and Gasink. 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.

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 within five hours of the emergency being declared.

In the event of an escalation of the crisis or the NGEM assessing the balance between supply and demand to be inadequate, NGEM 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.

Emergency response measures

Market suppliers are not required 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 NGEM. The NGEM would also instruct the operator to cease injection of gas into storage.

Fuel switching

The CER Secondary Fuelling Decision of 2009 imposes an obligation on gas-fired generators in Ireland to have the 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.

If gas-powered generators are unable to hold fuel stocks on site, they must ensure that fuel stocks are located in close proximity to the plant with a dedicated fuel line and pumping facilities.

Demand restraint

Large industrial customers would be the first to have their supplies curtailed, following 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 TSO, is responsible for implementing the load shedding plan. ESBNetwork's role in this process is crucial and has been tested on an ongoing basis with Eirgrid and annually with the United Kingdom 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 the United Kingdom, Ireland, Northern Ireland and the United Kingdom 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 the United Kingdom cannot be maintained. Significant progress has been made between relevant parties in developing load-shedding protocols between Ireland and Northern Ireland and Ireland (all island) and the United Kingdom.