

Summer Outlook 2018



Overview

The Summer Outlook Report 2018 sets out Gas Networks Ireland's analysis and views of the adequacy of the gas network for the summer ahead (April to October 2018). It is designed to inform the energy industry on the anticipated status of the gas system over the period, to help the industry in preparing for the summer months.

Key Messages

In the summer period 2017, Indigenous gas supplies made up 68% of ROI gas demand over the summer period (Inch 5%, Corrib 63%) with the remaining 32% being met from Great Britain (GB) imports through the Moffat Entry Point.

Based on the forecast indigenous supply scenario there will be a number of days over the summer period where maximum indigenous supply capacity will exceed the total ROI gas demand requirement.

Upstream planned annual maintenance is scheduled to take place at the Corrib Entry point for 5 days in September 2018 but are not anticipated to impact on gas shippers or suppliers.

Corrib is anticipated to operate at full capacity during the summer period.

Storage injection to the Kinsale storage facility was last seen in the 2015/16 gas year, PSE Kinsale Energy Limited have advised Gas Networks Ireland that it has commenced blowdown of Southwest Kinsale cushion gas. No injections to the Kinsale storage facility are to take place over the summer period.

The PCI 5.2 project for the 50 km twinning of the SWSOS pipeline is currently under construction, and is due to be commissioned in Q4 2018.

Gas Networks Ireland commenced its participation on the IBP trading platform hosted by EBI in early June 2018. This will allow GNI access real-time market prices when undertaking gas balancing requirements and also help to comply with the EU gas balancing code.

Gas Networks Ireland continues to monitor the level of shipper imbalances on the system both intra-day and at end of day. Gas Networks Ireland has raised concerns to the industry around the level of intra-day imbalances, with a pattern evident of some shippers leaving it until late in the gas day to enter their required gas flows onto the system, which is creating operational issues for the management of the transmission network.

Summer Period 2017 Supply

Figure 1 shows actual gas supply sources during the summer 2017 period. It can be seen that 68% of total ROI demand was met by indigenous supply sources during the 2017 summer period with the Moffat Entry Point supplying the remaining 32%.

Figure 1: Summer 2017 Actual Gas Supply

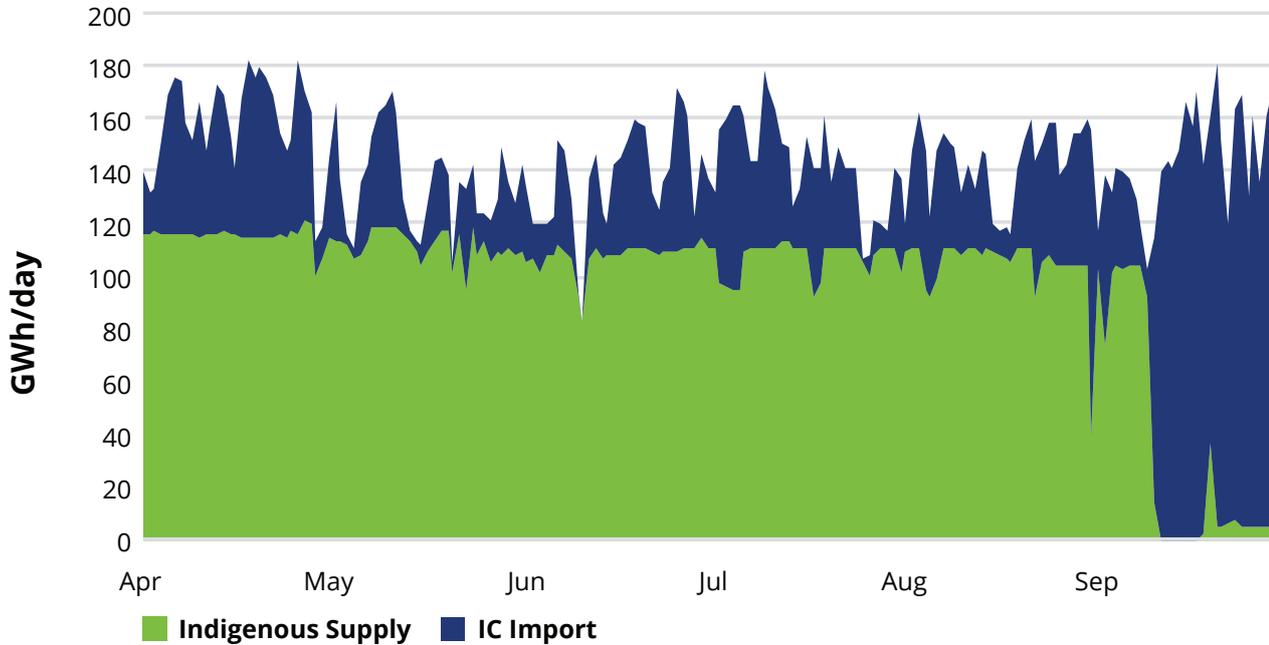


Table 1 shows the summer 2017 breakdown by entry point. It can be seen of the total ROI supply (including shrinkage) of 26,283 GWh, Corrib supplied the majority of gas with 16,421GWh (63%), followed by Moffat imports of 8,508GWh (32%) with Inch making up the remaining 1,353GWh (5%).

Table 1: Summer 2017 Actual Gas Supply By Entry Point

Corrib	Moffat	Inch	Total ROI Supply
16,422GWh	8,508GWh	1,353GWh	26,283GWh

SWSOS Pipeline Twinning (PCI 5.2)

The twinning of the 50 km section of pipeline on the South West Scotland Onshore System (SWSOS) is currently under construction, and is on programme to be commissioned in Q4 2018. The project will result in a fully twinned pipeline between Beattock and Brighthouse Bay compressor stations and an entire dual interconnector sub-system between Great Britain and Ireland, thereby enhancing Ireland's security of supply.

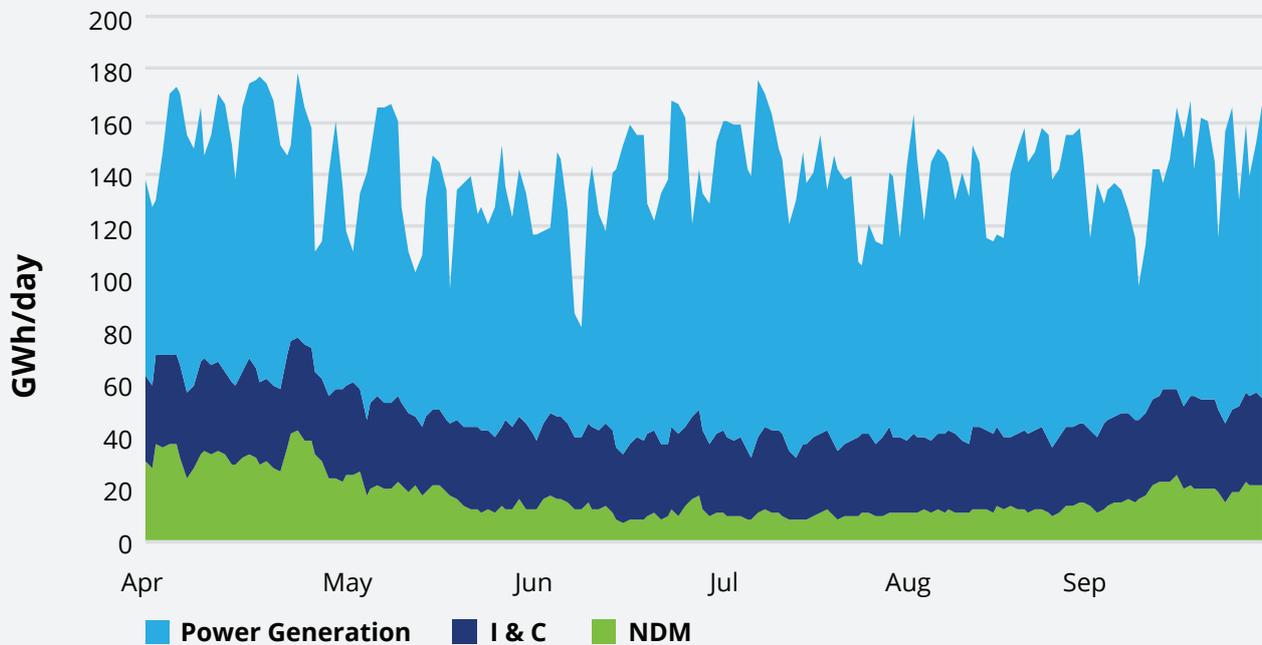
Kinsale Storage Facility

Storage injection to the Kinsale storage facility was last seen in the 2015/16 gas year, PSE Kinsale Energy Limited have advised Gas Networks Ireland that it has commenced blowdown of Southwest Kinsale cushion gas. As a result, for the summer period, the facility will operate as a production source, where gas will be withdrawn from the facility, in contrast to previous years where the facility was operated in storage injection mode over the summer months (and thereby created additional system demand in the summer period).

Summer Period 2017 Demand

Figure 2 shows actual gas demand for the 2017 summer period. Total gas demands over the period were 4.4% above demands from the 2016 summer period.

Figure 2: Summer 2017 Actual Gas Demand



In the power generation sector, gas demand was up 6.6% from the 2016 period. This can be attributed primarily to increasing electricity demand and to increasing electricity exports to Great Britain (GB). The Industrial & Commercial (I&C) sector gas demand for the period increased by 1.5% on the 2016 period. Non-daily metered (NDM) demand was the only sector which showed a reduction in total gas demand on the previous summer period (-1.8%). This reduction can be attributed almost entirely to annual weather variation; the weather corrected NDM sector demand was down by 0.6%. Table 2 shows the Summer 2017 gas demand by sector.

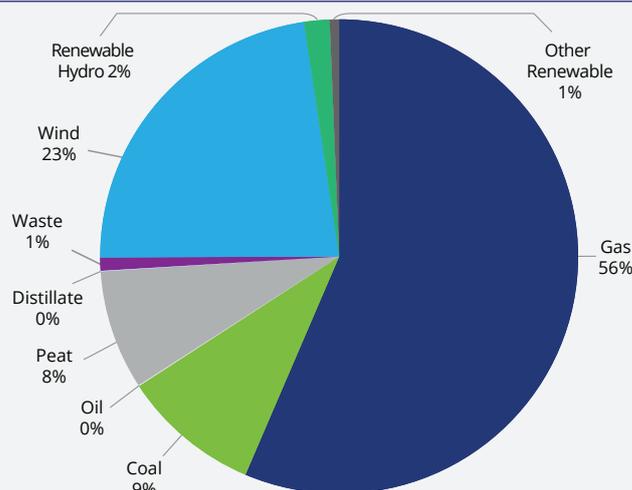
Table 2: Summer 2017 Actual Gas Demand By Sector

Power Generation	Total I&C	NDM	Total ROI Demand
17,076GWh	5,656GWh	3,132GWh	25,864GWh

Power Generation demand was again the most variable of the demand sectors, continuing on historical trends. The volatility of Power Generation demand is associated with the interdependency between this sector and renewable energy sources such as wind powered generation (and general demand conditions) on the Single Electricity Market (SEM).

Figure 3 shows the Powergen Fuel Mix for ROI for summer 2017. Gas contributed to approximately 56% of ROI's Powergen fuel requirement, reflecting its role in electricity generation.

Figure 3: Summer 2017 Powergen Fuel Mix



Summer Period 2018 Forecast Supply Position

Table 3 shows the forecast maximum indigenous supply scenario¹ for the summer period 2018. It is based on the outcome of consultation between Gas Networks Ireland and gas producers and suppliers, run as part of the Network Development Plan 2018.

Table 3: Summer Period 2018 Forecast Indigenous Supply Scenario

Corrib	KEL
92.9 GWh/day	8.1 GWh/day

It is anticipated, based on the supply scenario presented in Table 3 that there will be a number of days over the summer period where the maximum ROI indigenous supply capacity may exceed the daily ROI gas demand. In practice, this may lead to a reduction in indigenous gas supplies on the day to re-adjust to the prevailing demand on the system.

On days where demand exceeds the indigenous supply capacity, the balance of gas demand would be anticipated to be met by imports from the Moffat Entry Point². This leads to a positive Security of Gas Supply position for the summer period 2018.

Planned Summer Maintenance Activities

Standard scheduled maintenance works continually take place on the Gas Networks Ireland transmission system. The scheduled maintenance works for the summer 2018 period are not anticipated to impact on gas shippers or suppliers. Upstream of the Gas Networks Ireland transmission system, the following scheduled maintenance works are currently anticipated, as advised by gas producers:

Table 4: Scheduled Summer Maintenance Upstream of Entry Points

Entry Point	Scheduled Upstream Maintenance	Period	Duration
Corrib	Planned Annual Maintenance	10 th – 14 th September 2018	5 days

Data Freeze

In order to complete the detailed analysis required to produce this document, the input data was defined in May 2018, based on the most up to date information available at the time.

Disclaimer

Gas Networks Ireland has followed accepted industry practice in the collection and analysis of data available. However, prior to taking business decisions, interested parties are advised to seek separate and independent opinion in relation to the matters covered by this Summer

Gas System Operability

Gas Networks Ireland continues to monitor the level of system imbalances left on the system by shippers. During early 2018; given evidence of improved shipper behaviour, the CRU decided to revert to the original lower second tier pricing regime. Shipper behaviour since then has generally remained reasonable in terms of balancing their portfolio by end of day.

A growing issue however is the level of intra-day imbalances on the transmission system. This relates to the balance of incoming entry flow to the network and exit flow leaving the network throughout the gas day. Gas Networks Ireland are witnessing a continued trend of a subset of shippers not entering gas flows until late in the day which is leading to a number of operational problems including:

- Depleting system linepack and network pressures within day
- Potential need to buy balancing gas earlier in the day and sell it again later in the day to minimise undesired system pressure swings
- Challenges in delivering the required imports at Moffat due to the inability to operate Beattock compressor station in a stable and efficient manner
- Increased stress on compressor fleet due to significant ramping of the gas flow in the last few hours of the gas day to deliver the late imbalance nominations

Whilst Gas Networks Ireland recognise the operational challenges faced by shippers in correctly adjusting their inputs and outputs to the system, there needs to be recognition that gas already burned at exit points should be entering the system at an earlier stage in the day.

Gas Networks Ireland commenced its participation on the EBI trading platform in early June 2018. Traditionally, balancing gas transactions were undertaken under bilateral contracts with an individual shipper, but Gas Networks Ireland will now seek to secure its balancing gas requirements on the IBP market. Gas Networks Ireland is already seeing the benefit of the trading platform, with the ability to promptly trade out balancing gas and deliver better balancing transaction costs for the shippers. To achieve full compliance with the EU gas balancing regulation, Gas Networks Ireland is currently consulting with the CRU and industry on the cash out regime and tolerances regime and a transition to utilising the pricing on the trading platform as the basis for shipper imbalance charges.

Outlook and should not rely solely upon data and information contained therein. Information in this document does not purport to contain all the information that a perspective investor or participant in the Republic of Ireland's gas market may need.

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¹ The supply scenario represents maximum daily supply capacities at indigenous sources.

Actual supply profiles on a given day may differ from the maximum daily scenario assumed in Table 3.

² The Moffat Entry Point has a current technical capacity of 342 GWh/day and supplies gas to ROI, Northern Ireland and Isle of Man.