

Summer Outlook 2020



Gas
Networks
Ireland



Overview

The Summer Outlook 2020 sets out Gas Networks Ireland's analysis and views of the adequacy of the gas network for the summer ahead (April to October 2020). 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 March 2020, the Irish government restrictions in response to the COVID-19 pandemic were introduced. There has been no resulting negative impact on the operation of the gas network. There have been days through March May 2020 where gas has accounted for over 80% of electricity generation on the Single Electricity Market (SEM). The gas network has continued to maintain security of supply to houses, businesses and power generation customers without interruption during this period.

In May 2020 Cush renewable gas facility was designated as an entry point to the Gas Networks Ireland transportation system. This means that locally produced, carbon neutral, renewable gas is now traded on to the network and forms part of the regular gas supply in Ireland's gas network. Cush alone has the capacity to supply renewable gas to c. 11,000 homes.

In the summer period 2019, indigenous gas supplies made up 49% of Republic of Ireland (ROI) gas demand over the summer period (Inch 4%, Corrib 45%) with the remaining 51% being met from Great Britain (GB) imports through the Moffat Entry Point.

Based on the forecast indigenous supply scenario, daily summer demand is forecast to exceed the indigenous supply capacity, with the balance of gas demand to be met by imports from the Moffat Entry Point.

Upstream planned maintenance is scheduled to take place at the Corrib Entry point for 21 days in September 2020.

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

Kinsale storage facility continues to blowdown cushion gas. Production at the facility is anticipated to cease entirely over the summer period, the date of which is being kept under review with Kinsale Energy Limited.

Gas Networks Ireland monitors transmission system imbalances as a result of shipper behaviour on a daily basis. Gas Networks Ireland continues to observe a trend, whereby a subset of shippers are leaving the system long on a consistent basis, i.e. these shippers are entering more gas into the system than they offtake.

COVID-19 Response

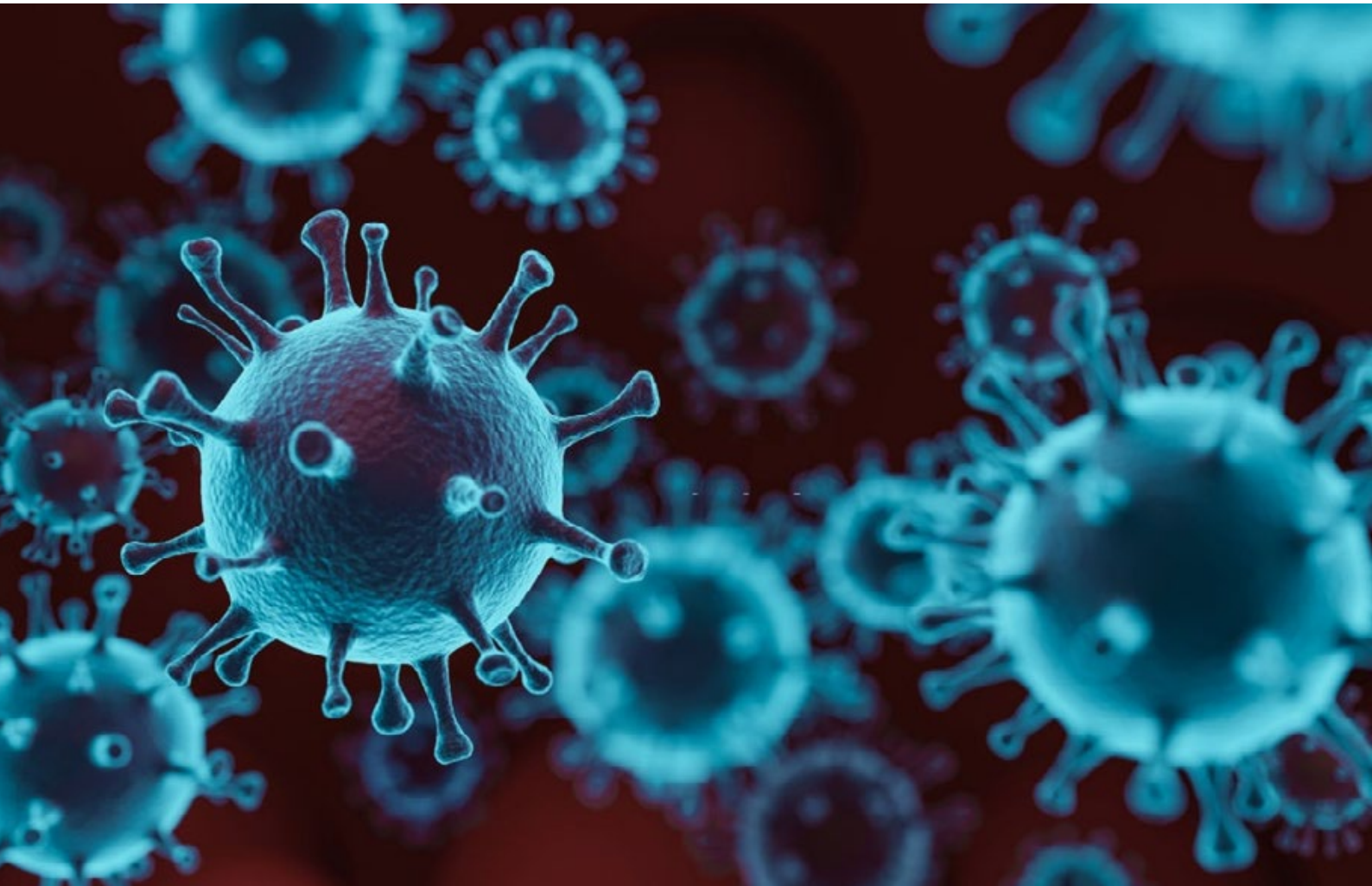
In March 2020, the Irish government restrictions in response to the COVID-19 pandemic were introduced. There has been no resulting negative impact on the operation of the gas network. There have been days through March-May 2020 where gas has accounted for over 80% of electricity generation on the Single Electricity Market (SEM). The gas network has continued to maintain security of supply to houses, businesses and power generation customers without interruption during this period.

Gas Networks Ireland's Grid Control team in Cork is one of the business critical teams working day and night, seven days a week to ensure that gas flows reliably and safely across our network, to meet our customers' gas requirements in homes, power generation stations and other essential businesses around the country.

Gas Networks Ireland have activated the use of its backup control centre at Midleton, Co. Cork. This has allowed the Grid Control team to alternate day-shift and night-shift crews between the locations in Cork City and Midleton, thereby adhering to social distancing guidelines, while scheduled deep cleans of both locations can be performed between shifts.

Gas Networks Ireland continues to provide essential support for vulnerable customers and works in support of other services and industries deemed essential by the Government in the current crisis (such as hospitals). Gas Networks Ireland has offered its assistance to the COVID Engineering Alliance, which has been setup to provide support to help increase resilience and capacity in the healthcare system. The Alliance has requested support regarding equipment needs and professional expertise in the event that a surge in the number of COVID-19 patients occurs. Should the need emerge, Gas Networks Ireland has identified stock in the form of Nitrogen bottles which could be repurposed for use by the HSE.

Gas Networks Ireland have observed a reduction in gas demand (c. 5%) in the months of March and April 2020 against the equivalent period in 2019. While some of this reduction can be attributed to warmer temperatures, a significant portion can be related to the impact of the restrictions introduced in response to the COVID-19 pandemic. Gas Demand in the Industrial and Commercial sector, particularly in the areas of Construction and Hospitality have shown a noticeable decrease, as only essential businesses have been operating as normal prior to the phased lifting of restrictions.



Summer Period 2019 Supply

Figure 1 shows actual gas supply sources during the summer 2019 period. It can be seen that 49% of total ROI demand was met by indigenous supply sources during the 2019 summer period with the Moffat Entry Point supplying the remaining 51%.

Figure 1: Summer 2019 Actual Gas Supply

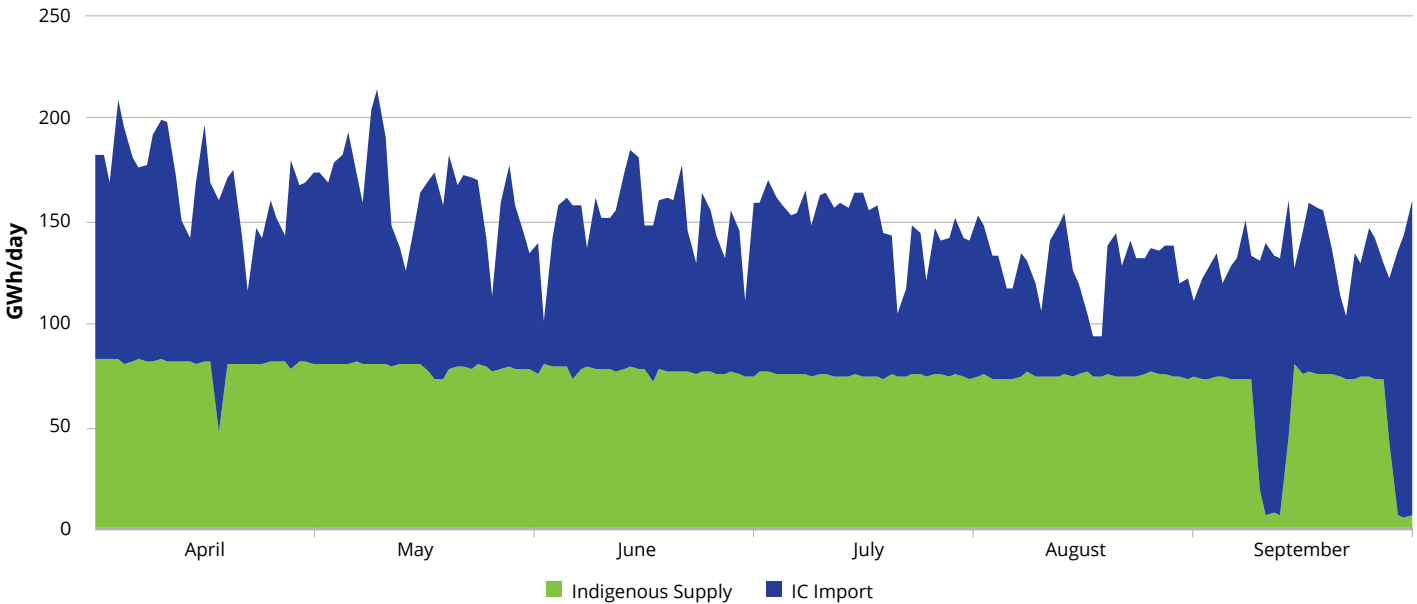


Table 1 shows the summer 2019 breakdown by entry point. It can be seen of the total ROI supply (including shrinkage) of 27,823 GWh, Moffat imports supplied the majority of gas with 14,209 GWh (51%), followed by Corrib which supplied 12,455 GWh (45%), with Inch making up the remaining 1,159 GWh (4%).

Table 1: Summer 2019 Actual Gas Supply by Entry Point

Moffat	Corrib	Inch	Total ROI Supply
14,209 GWh	12,455 GWh	1,159 GWh	27,823 GWh

Kinsale Storage Facility

PSE Kinsale Energy Limited (KEL) advised the Commission for Regulation of Utilities (CRU) in 2015 that it planned to cease full storage operations in 2016/17 and commence blowdown of Southwest Kinsale cushion gas. Production gas is currently being supplied from the Inch Entry Point and it is anticipated that production will cease over the summer period. The anticipated Cessation of Production date continues to be kept under review with KEL.

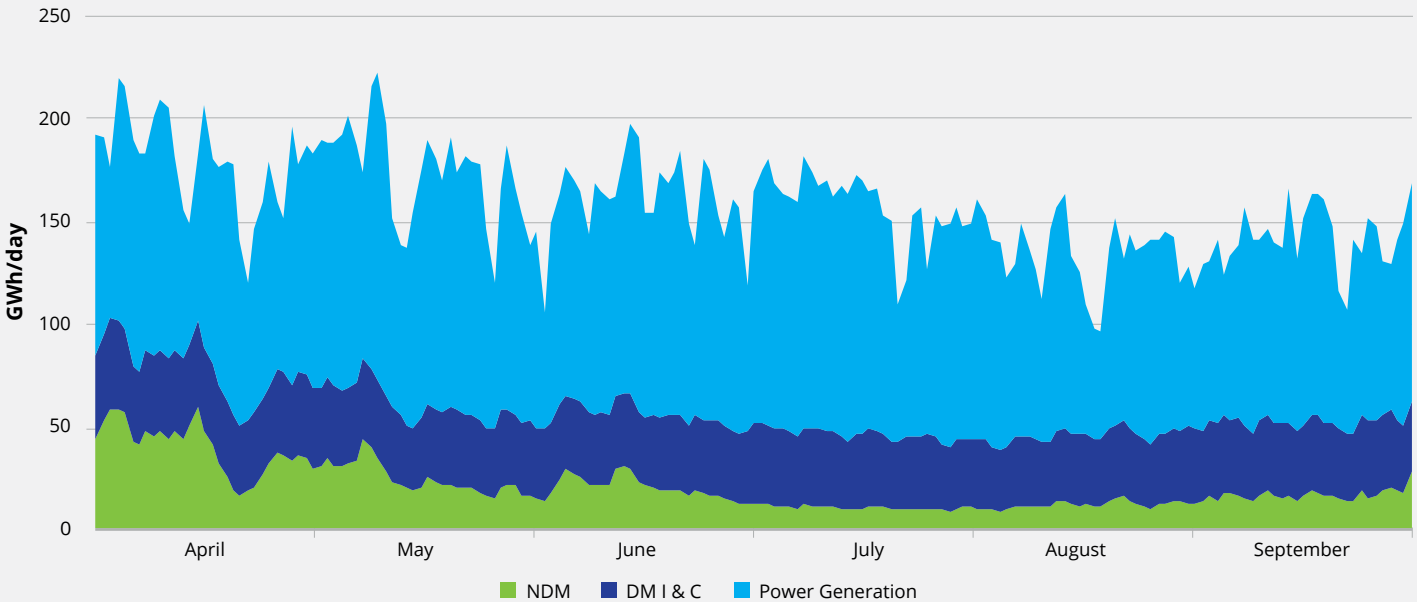
Table 2: Inch Forecast Maximum Daily Supply by Gas Year

Inch Entry Point	2019/20	2020/21
Daily Supply (GWh/d)	5.5	0

Summer Period 2019 Demand

Figure 2 shows actual gas demand for the 2019 summer period. Total gas demands over the period were 2.3% above demands from the 2018 summer period.

Figure 2: Summer 2019 Actual Gas Demand



Daily Metered Industrial & Commercial (DM I&C)¹ sector gas demand for the period increased by 8.4% on the 2018 period. Non-daily metered (NDM) demand increased by 11% on the 2018 period; the weather corrected NDM sector demand was up by 8.2%. Table 3 shows the summer 2019 gas demand by sector.

Table 3: Summer 2019 Actual Gas Demand by Sector

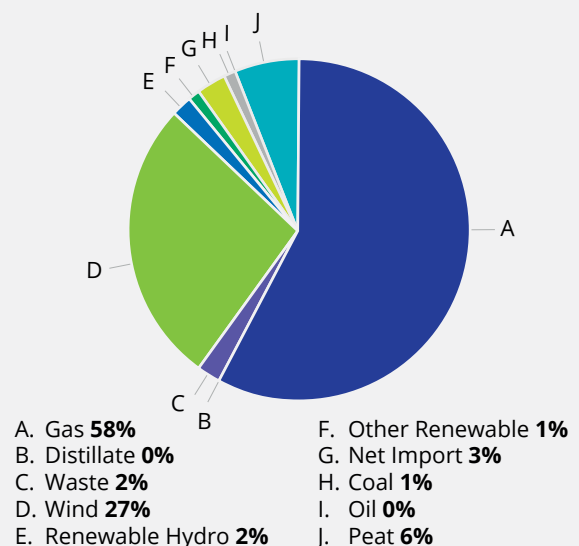
Power Generation	Total I&C	NDM	Total ROI Demand
17,677 GWh	6,263 GWh	3,579 GWh	27,520 GWh

In the power generation sector, gas demand was 1.2% lower than the 2018 summer period. It is noted that the 2018 summer period exhibited exceptionally high gas-fired power generation, driven by low wind generation and due to other thermal power plants in the Single Electricity Market (SEM) being on outage during this time. Over the 2019 summer period, wind generation supplied 27% of Ireland's electricity demand, while gas-fired power generation accounted for 58%. In comparison, wind generation supplied 22% in the same period in 2018, while gas-fired power generation accounted for 59%.

Power generation was the most variable of the demand sectors across the 2019 summer period, continuing on historical trends. Low wind generation typically results in an increase in gas-fired generation and vice versa. The flexibility of gas-fired generation complements the intermittent nature of wind generation, and also the intra-day changes in the electricity demand profile. Over the summer 2019 period, on high wind-days, up to 72% of Ireland's electricity demand was met by wind generation. On the low wind days, this figure was as low as 1%.

Figure 3 shows the power generation Fuel Mix for ROI for summer 2019. Gas contributed to approximately 58% of ROI's power generation fuel requirement, reflecting its important role in electricity generation.

Figure 3: Summer 2019 Power Generation Fuel Mix



¹ Includes all Large Daily Metered and Daily Metered gas customers.

Summer Period 2020 Forecast Supply Position

Table 4 shows the forecast maximum indigenous supply scenario² for the summer period 2020. It is based on the outcome of consultation between Gas Networks Ireland, gas producers and suppliers, as part of the preparation for the Network Development Plan.

Table 4: Summer Period 2020 Forecast Indigenous Supply Scenario

Corrib	KEL
63.6 GWh/d	5.5 GWh/d

During the summer period, Corrib gas supplies are anticipated to decline to less than 62% of initial peak production levels. Based on the supply scenario presented in Table 4, daily summer demand is forecast to exceed the indigenous supply capacity, with the balance of gas demand to be met by imports from the Moffat Entry Point³.

Gas System Operability

Gas Networks Ireland monitors transmission system imbalances as a result of shipper behaviour on a daily basis. System imbalance relates to the balance of incoming entry flow to the network and exit flow leaving the network throughout the gas day. Gas Networks Ireland continues to observe a trend, whereby a subset of shippers are leaving the system long on a consistent basis, i.e. these shippers are entering more gas into the system than they offtake. The current low price of gas, and the associated 3.5% of the System Average Price that is levied as a penalty against the Shippers for imbalances, does not serve as an incentive to Shippers to appropriately balance their portfolios.

Gas Networks Ireland is required to actively sell the excess volumes into the market via the Marex Spectron Trading Platform in order to keep system pressures below the required operational limits.

The previously highlighted issues of Shippers providing very late Entry Nominations to GNI at Moffat and its associated impact on the efficient running of the compressor stations has improved. This improvement is attributable to improved Shipper behaviour following repeated highlighting of the issues by Gas Networks Ireland and also a natural increase in flow requirements at Moffat as Corrib and Kinsale production decline.

Planned Summer Maintenance Activities

Standard scheduled maintenance works continually take place on the Gas Networks Ireland transmission system. The scheduled Gas Networks Ireland maintenance works for the summer 2020 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/connected system operators:

Table 5: Scheduled Summer Maintenance Upstream of Entry Points

Entry Point	Scheduled Upstream Maintenance	Period	Duration (Days)
Corrib	Planned Maintenance	7th – 27th Sept 2020	21

Data Freeze

In order to complete the detailed analysis required to produce this document, the input data was defined in April 2020, 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

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.

Copyright Notice

All rights reserved. This entire publication is subject to the laws of copyright. This publication may not be reproduced or transmitted in any form or by any means, electronic or manual, including photocopying without prior written permission of Gas Networks Ireland.

² 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 4.

³ The Moffat Entry Point has a current technical capacity of 387GWh/d and supplies gas to ROI, Northern Ireland and Isle of Man.