An Coimisiún um Rialáil Fóntais
Commission for Regulation of Utilities

# NATIONAL GAS SUPPLY EMERGENCY PLAN 2023-27

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# CRU Strategic Plan 2022-24

## Our Mission

- Protecting the public interest in water, energy and energy safety.

## Our Vision

- Safe, secure and sustainable supplies of energy and water, for the benefit of customer now and in the future

## Our Strategic Priorities

- Ensure Security of Supply
- Drive a Low Carbon Future
- Empower and Protect Customers
- Enable our People and Organisational Capacity

# Executive Summary

EU Member States are required to implement measures to safeguard security of gas supply including, the development of an Emergency Plan. This Emergency Plan provides a framework for the interaction between Gas Networks Ireland's (GNI) operational emergency plan (the Natural Gas Emergency Plan – NGEP) and the European measures concerning the security of gas supply and emergency management as provided for under Regulation 2017/1938. This Emergency Plan:

i. contains information of the three crisis levels identified within the Regulation (i.e. "early warning", "alert" and "emergency") in Section 1.5;

ii. defines the roles and responsibilities of the CRU, Natural Gas Undertakings (NGUs), and other market participants at each crisis level in Section 3;

iii. identifies measures and actions to be taken to mitigate the potential impact of a gas supply disruption on the supply of electricity generated from gas;

iv. contains detailed procedures and measures to be followed for each crisis level, including the corresponding schemes on information flows in Section 2.5;

v. identifies the contribution of market-based measures for coping with situation at "alert" level, and mitigating the situation at "emergency" level in Section 2.1;

vi. identifies the contribution of non-market-based measures to be implemented at "emergency" level, and assesses the degree to which the use of such non-market-based measures is necessary to cope with a crisis in Section 2.2;

vii. assesses the effects of non-market-based measures and the procedures required to implement them in Section 2.2;

viii. describes the mechanisms used to co-operate with other Member States for each crisis level;

ix. details reporting obligations on NGUs at alert and emergency levels in Section 3.4.1; and

x. establishes a list of predefined actions to make gas available in the event of an emergency, including commercial and compensation agreements between the parties involved in such actions in Section 2.3.

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# Glossary of Terms and Abbreviations

| Abbreviation or Term | Definition or Meaning |
|---|---|
| **CRU** | Commission for Regulation of Utilities |
| **DECC** | Department of the Environment, Climate and Communications |
| **BECP** | Blackstart Emergency Communications Plan |
| **BEIS** | Department of Business Energy and Industrial Strategy |
| **DM** | Daily Metered |
| **DSO** | Distribution System Operator |
| **EPON** | Energy Press Officers Network |
| **EU** | European Union |
| **EWIC** | East-West Interconnector |
| **GB** | Great Britain |
| **GCG** | Gas Co-ordination Group |
| **GEEP** | Gas Electricity Emergency Planning |
| **GERT** | Gas Emergency Response Team |
| **GNI** | Gas Networks Ireland |
| **GPI** | Generator Performance Incentive |
| **IBP** | Irish Balancing Point |
| **IEA** | International Energy Agency |

| | |
|---|---|
| **LDM** | Large Daily Metered |
| **MEMF** | Major Emergency Management Framework |
| **NBP** | National Balancing Point |
| **NDM** | Non-daily Metered |
| **NECG** | National Emergency Co-ordination Group |
| **NGEM** | National Gas Emergency Manager |
| **NGEP** | Natural Gas Emergency Plan |
| **NI** | Northern Ireland |
| **NIS Directive** | Directive (EU) 2016/1148 of the European Parliament and of the Council of 6 July 2016 concerning measures for a high common level of security of network and information systems across the Union |
| **NGU** | Natural Gas Undertaking |
| **OES** | Operator of Essential Services |
| **PSRP** | Power System Restoration Plan |
| **SEAI** | Sustainable Energy Authority of Ireland |
| **S.I.** | Statutory Instrument |
| **SITREP** | Situation Report |
| **The Regulation** | EU Regulation 2017/1938 concerning security of gas supply, as amended |
| **TSO** | Transmission System Operator |
| **UK** | United Kingdom |

# 1. Introduction

Pursuant to the implementation of EU Regulation 2017/1938 concerning security of gas supply ("the Regulation"), Member States are required to implement measures to safeguard security of gas supply including the development of an Emergency Plan. The CRU as the designated Competent Authority for Ireland, has prepared this National Gas Supply Emergency Plan (hereafter in this document referred to as the Emergency Plan) in accordance with Article 8 and 10 of the Regulation.

The primary objective of the Emergency Plan is to ensure a consistent and coordinated response to an unplanned gas supply interruption in order to ensure that a gas supply emergency is prevented, or if not possible is resolved expeditiously and competently, thereby minimising effects on the operation of the gas market at a national, regional and European level.

In terms of preparing this Emergency Plan, cognisance was given to the Regulation's requirements that:

- non-market-based measures are to be used only when market-based mechanisms alone can no longer ensure supplies (in particular to protected customers);
- no measures are introduced, which unduly restrict the flow of gas within the internal market, at any time;
- no measures are introduced that are likely to endanger seriously the gas supply situation in another Member State; and
- cross-border access to infrastructure is maintained as far as technically and safely possible in the event of an emergency.

The Emergency Plan as defined by Articles 8 and 10 of the Regulation is based on:

- the Risk Assessment, which reflects market developments (both at a national, regional and European level);
- consultation with industry stakeholders (i.e. NGUs, and organisations representing the interests of household and industrial gas customers); and
- interactions with regional Competent Authorities (i.e. BEIS), and the European Commission.

The Emergency Plan will be updated every 4 years in accordance with Article 10(3), or more frequently if the CRU considers this necessary. The rationale for updating the Emergency Plan will be based on the Risk Assessment and the Preventive Action Plan, which are also updated every

4 years, and any other reasons considered prudent by the CRU including where appropriate lessons learned from emergency exercises.

## 1.1 Context of Emergency Plan

This Emergency Plan provides a framework for the interaction between Gas Networks Ireland's (GNI) operational emergency plan (the Natural Gas Emergency Plan (NGEP)) and the European measures concerning the security of gas supply and emergency management as provided for under the Regulation.

GNI's NGEP sets out in detail the operational arrangements to be affected in addressing a natural gas emergency in Ireland, including:

- detailed operational plan containing the procedures to be followed in a gas emergency;
- the roles and responsibilities of energy participants;
- the reporting arrangements and structures;
- contact details;
- communication protocols; and
- instruction and advice templates.

In contrast, this Emergency Plan contains the procedures to be followed when there is a potential or actual national gas supply crisis and focuses on interactions with the EU Commission via the Gas Co-ordination Group (GCG).

## 1.2 Emergency Plan: High Level Roles and Responsibilities

The roles and responsibilities of the primary actors in the context of this Emergency Plan are outlined below, and are further elaborated upon in Section 4, in conjunction with other relevant market participants.[1]

i. **The Department of the Environment, Climate and Communications (DECC)** is the Government Department responsible for the formulation of energy policy, including security

[1] Appendix 1 provides a high-level illustration of the roles and responsibilities of the primary actors involved in this Emergency Plan.

of energy supply.[2] In the context of a gas emergency, DECC would assume the role of Lead Government Department. As Lead Department, DECC would be responsible for convening and chairing the National Emergency Co-ordination Group (NECG), which consists of all Government Departments and the relevant agencies. Essentially, the NECG would co-ordinate the wider, strategic, national response to a major gas emergency. This would include the activation of the Major Emergency Management Framework (MEMF), through which the response of the emergency services is coordinated. The NECG would also co-ordinate the national media response and hold daily press briefings. Additionally, in terms of its interactions with Europe, the DECC is a member of the GCG.

Further information regarding national structures for emergency planning in Ireland is available in the Department of Defence Strategic Emergency Planning Guidance document. At a high level, these structures include a Government Task Force on Emergency Planning (chaired by the Minister for Defence), and an Inter-Departmental Working Group on Emergency Planning (chaired by the Office of Emergency Planning), in addition to an Emergency Planning Media Unit (chaired by Government Information Service), and a National Security Committee.

In conducting its role as Lead Government Department, DECC may require advance briefing and/or attendance in person at the National Emergency Co-ordination Group by relevant organisations.

DECC are also represented on the **Gas Emergency Response Team**.

ii. **The Commission for Regulation of Utilities (CRU)** is the Regulatory Authority for electricity and gas in Ireland. The CRU has statutory responsibility for monitoring and ensuring security of gas and electricity supplies. The CRU has been designated by DECC as Competent Authority under Article 3(3) of the Regulation to ensure the implementation of the measures set out in the Regulation and also actively engages with GCG meetings.[3]

CRU are also represented on the **Gas Emergency Response Team**.

iii. **GNI**[4] is the gas Transmission System Operator (TSO) for Ireland with responsibility for system operation, network planning and market arrangements. The CRU has appointed GNI as the **National Gas Emergency Manager (NGEM).** The NGEM is responsible for the practical and operational management of a gas supply emergency. Additionally, GNI is

[2] In relation to oil, DECC is also responsible for the development and implementation of Ireland's oil security policy, which includes contingency planning. Such contingency arrangements are reflected in DECC's Oil Emergency Management Handbook.

[3] In accordance with S.I. 745/2020 EUROPEAN UNION (SECURITY OF NATURAL GAS SUPPLY), the CRU has been formally designated as Ireland's Competent Authority for the implementation of Regulation (EU) 2017/1938.

[4] In accordance with national legislation, S.I. No. 697/2007 - European Communities (Security of Natural Gas Supply) Regulations 2007, the CRU appointed GNI as the NGEM. In accordance with EU Regulation 2017/1938 the CRU appointed GNI as the Crisis Manager.

responsible, under its licence from the CRU, for the development of the NGEP, which is approved by the CRU. An important feature of GNI's NGEP is the **Gas Emergency Response Team (GERT)** which is convened by the NGEM. The GERT is chaired by the NGEM and comprises GNI, CRU, EirGrid (the electricity TSO), and DECC. The GERT is responsible for managing the operational response to the gas supply emergency. The CRU has also appointed GNI as the **Crisis Manager** in accordance with Article 10 of the Regulation. The Crisis Manager will provide technical liaison between the NGEM, the National Co-ordination Group and the GCG. This role may include the provision of technical updates at NCG press briefings.

iv. **EirGrid:** EirGrid is Ireland's electricity TSO, and will decide during a gas supply emergency, which power stations if required should fuel switch, reduce output or come off load. In order to facilitate communications during a gas emergency, EirGrid and GNI have developed Joint Procedures for the Control of Emergencies. With reference to electricity emergencies, EirGrid have also developed a Power System Emergency Communication Plan (PSECP), a Blackstart Emergency Communications Plan (BECP), and a Power System Restoration Plan (PSRP).[5]

EirGrid are also represented on the **Gas Emergency Response Team.**

v. **ESB Networks** manages the operation of the electricity distribution network in Ireland and provides the interface with the distribution network operator (DSO) in Northern Ireland (NI), Northern Ireland Electricity.

vi. **Energy Press Officers Network (EPON)**: The EPON consists of communication experts from DECC, CRU, EirGrid, GNI and ESB Networks, as required. The purpose of the EPON is to ensure the delivery of a consistent national media response in the event of an emergency. In the event of a Natural Gas Emergency, GNI will co-ordinate the national media response through the EPON. In the event that the government's NECG is convened, the NECG will manage the national media response.

[5] The PSECP sets out the appropriate communication and stakeholder management procedures to be followed in the event of an Alert (where appropriate) or Emergency on the electricity system. The BECP sets out the appropriate communication and stakeholder management procedures to be followed in the event of a widespread electricity system blackout. In contrast, the PSRP outlines the detailed operational response to a system blackout.

## 1.3 The Natural Gas Emergency Plan (NGEP)

The Natural Gas Emergency Plan (NGEP) is the industry procedure for managing a natural gas emergency in Ireland and provides detail on the role of the National Gas Emergency Manager (NGEM).

The NGEP is intended to provide for the following:

- the appointment of the National Gas Emergency Manager (NGEM).
- procedures for the operator of a gas transmission system to declare a natural gas emergency.
- the roles and responsibilities of the relevant stakeholders involved in the emergency response.
- measures to minimise the impact on electricity generation and on the safe, secure, reliable operation of the national electricity system in so far as that system is dependent on natural gas.
- measures to ensure that supplies for domestic customers (i.e. protected customers) and in so far as it is possible other customers that cannot switch their gas consumption to other energy sources are protected in the event of an emergency.

The NGEP is prepared by GNI by direction of the CRU and is subject to approval by the CRU. GNI has been appointed as the National Gas Emergency Manager (NGEM) by the CRU for the purposes of managing a natural gas emergency in Ireland.

A natural gas emergency could be caused by:

a) Insufficient gas supplies available to the gas transportation network (i.e. demand exceeding supply).
b) A critical transportation constraint (this may occur where there is sufficient gas available but due to a constraint on the transmission network the gas cannot be transported to the required location).
c) Off-specification natural gas entering the transportation network (including odourant failure).

The natural gas emergency process in the NGEP is shown in Table 1 below.

| **NATURAL GAS EMERGENCY CLASSIFICATION** | | | |
|---|---|---|---|
| **EU Crisis Level** | **NGEP Stage** | **Description** | **Action** |
| Early Warning | None | Evidence of an event that may | • Notify and liaise with gas industry stakeholders.<br>• Convene GERT. |

| | | | |
|---|---|---|---|
| | | lead to an Alert or Emergency level | • Increase system line-pack.<br>• Cease non-essential maintenance. |
| Alert | 1 | Gas supply disruption that is manageable by market measures | • Voluntary load reduction in power generation.<br>• Voluntary increase in indigenous gas supplies.<br>• Interrupt injection into storage (if present).<br>• Public Appeal.<br>• Consider use of system line-pack.<br>• Request withdrawal from storage (if present). |
| Emergency | 2 | Emergency Declared: Load Shedding | • Maximise indigenous gas production.<br>• Public Appeal.<br>• Initiate Firm Load Shedding of LDM Sector.<br>• Maximise use of system line-pack and storage (if present).<br>• Progressive Firm Load Shedding of DM and NDM Sectors. |
| | 3 | Allocation & Isolation | • Allocation and Isolation of remaining gas supply. |
| | 4 | Restoration | • Restoration of supplies and revoke emergency steps. |

**Table 1: EU Crisis Levels and Stages of the Natural Gas Emergency Plan**

A summary of the major events which can trigger a natural gas emergency are shown in **Error! Reference source not found.**. This list is not exhaustive, recognising that other events can occur.

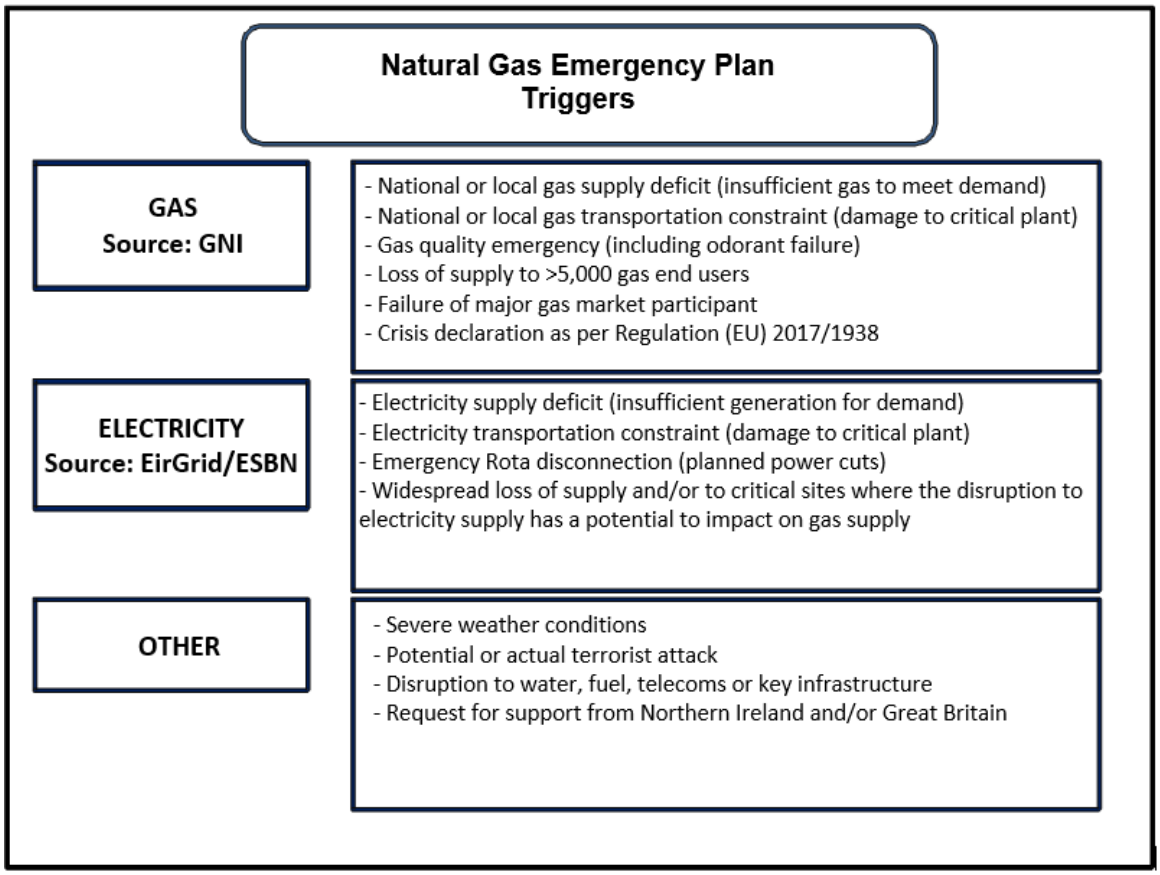



**Figure 1: Triggers for a Gas Emergency**

These triggers are intended to provide guidance to the NGEM on the declaration of an emergency and thus activating the relevant provisions of the NGEP. There may be other types of incidents that would require an emergency response and the activation of the NGEP; the NGEM has discretion to declare an emergency if so required.

The emergency framework in place in anticipation of or following the declaration of an emergency consists of emergency planning and operational response.

Emergency planning for the purposes of the NGEP is undertaken by GNI in consultation with the gas industry, electricity industry, the CRU and government. Emergency exercise feedback is provided by GNI at the **Gas Electricity Emergency Planning Group (GEEP)** which meets twice per year and is chaired by the CRU.

Operational response is undertaken by the **Gas Emergency Response Team (GERT)**. This body will be chaired by the NGEM and will have a core membership of DECC, CRU, GNI, and EirGrid. The GERT will be established in the event of a potential or actual emergency and will support the NGEM in the implementation of the NGEP. The GERT may also be established as required to test the effectiveness of the arrangements. The members of the GERT will interface with and provide information to the NGEM and be responsible for implementing the directions of the NGEM. The measures to be adopted for managing a natural gas emergency are described in Section 2 below.

The operation of the NGEP during an emergency is outlined in the following Figure 2 and summarised as follows:

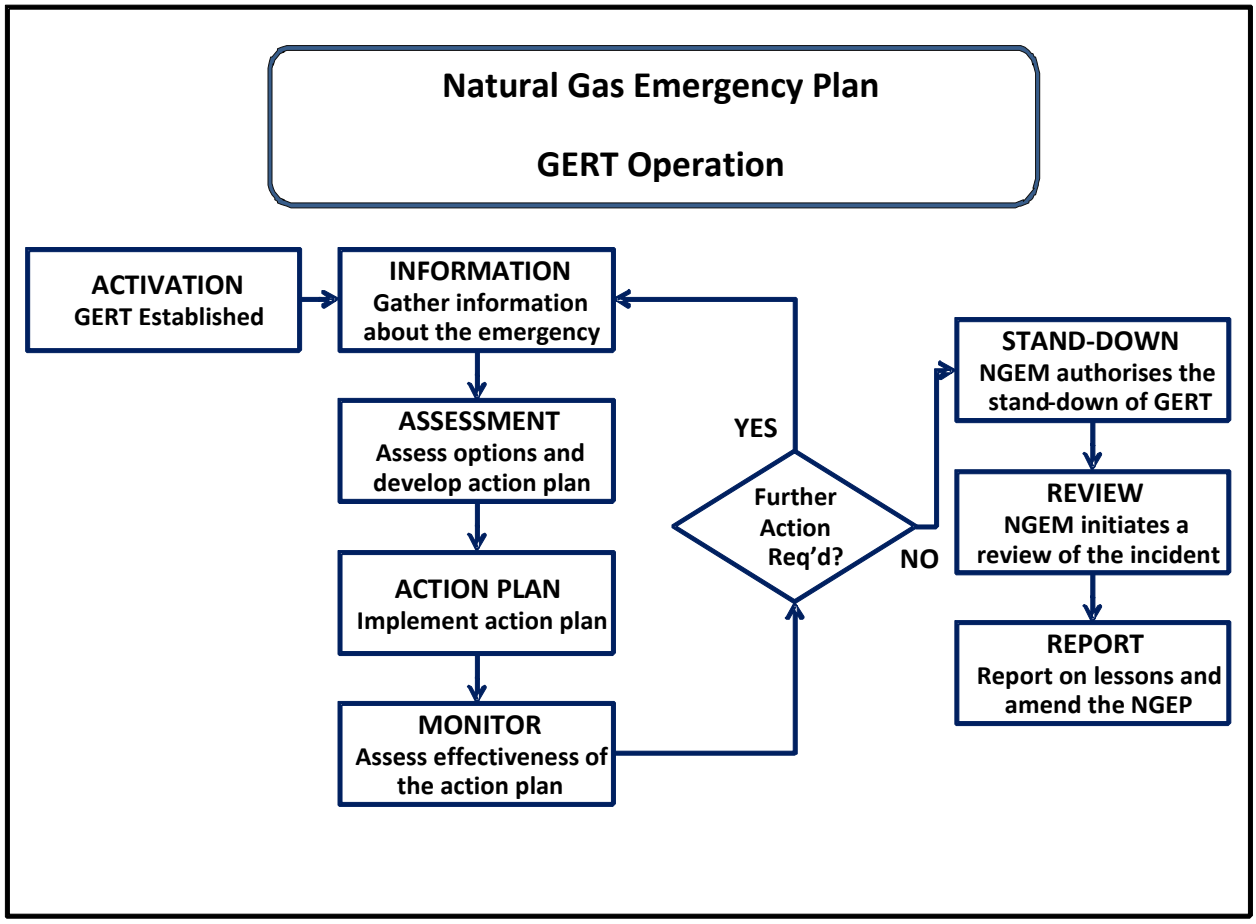



**Figure 2: GERT Operation**

a) Activation: the NGEM will determine the regularity of the GERT meetings depending on the nature and severity of the emergency.
b) Information/Assessment: the Support Team will gather information on the emergency, assess the extent and consequences and produce a Situation Report (SITREP).
c) Action Plan: the Support Team will prepare an Action Plan and the NGEM with the support of the GERT will review and, if appropriate, approve the Action Plan.
d) Monitor: the Support Team will monitor the effectiveness of the Action Plan on behalf of the NGEM and will report back to the GERT as required.
e) Stand Down: if the NGEM confirms that the emergency has been resolved then he/she can authorise for the GERT to stand down.
f) Review: after any emergency requiring the establishment of the GERT the NGEM will arrange for a review of the emergency to be undertaken to ensure any learning points are captured.
g) Report: a report on the emergency will be prepared and will normally be provided to the GERT by the NGEM and recommendations will be incorporated into the NGEP.

## 1.4 Crisis Manager

The CRU has designated GNI as the Crisis Manager in accordance with Article 10 of the Regulation. The Crisis Manager will provide technical liaison between the NGEM, the National Co-ordination Group and the GCG. This role may include the provision of technical updates at NECG press briefings. Further information about GNI's responsibilities is provided in the section below.

## 1.5 Crisis Levels

Article 11(1) of the Regulation identified three potential crisis levels that are to be activated in terms of addressing a threat to gas supplies (subject to the scale of the crisis), namely:

- Level 1: early warning;
- Level 2: alert; and
- Level 3: emergency.

The objective of this section is to elaborate upon these crisis levels and identify the various events that would trigger a particular crisis level.

As described in Section 1.3, the EU crisis levels are aligned with those of the NGEP. Table 2 shows high-level actions at each stage of the NGEP that may be implemented by GNI as part of the emergency strategy authorised by the NGEM.

*Table 2: EU Crisis Level and associated NGEP Emergency Stages*

| **EU Regulation Crisis Level** | **NGEP Levels & Actions** | |
|---|---|---|
| **Early Warning** | None | Notify and liaise with gas industry stakeholders.<br>Convene GERT.<br>Increase system line-pack.<br>Cease non-essential maintenance. |
| **Alert** | Potential Emergency | Voluntary load reduction in power generation.<br>Voluntary increase in indigenous gas supplies.<br>Interrupt injection into storage (if present).<br>Public Appeal.<br>Consider use of system line-pack.<br>Request withdrawal from storage (if present). |

| | | |
|---|---|---|
| **Emergency** | Emergency: Load Shedding | Maximise indigenous gas production.<br>Public Appeal.<br>Initiate Firm Load Shedding of LDM Sector.<br>Maximise use of system line-pack and storage (if present).<br>Progressive Firm Load Shedding of DM and NDM Sectors. |
| | Emergency – Allocation & Isolation | Allocate existing gas supply to protected customers and isolate networks if required |
| | Emergency - Restoration | Emergency ended; restore gas supply in an orderly and safe manner |

### 1.5.1 Early Warning

An 'early warning' is declared[6] where there is concrete, serious and reliable information that an event may occur, which is likely to result in a significant deterioration of Irish gas supplies and is likely to lead to the 'alert' or 'emergency' level being triggered. This could be, for example, a problem with the European gas supply chain or an Irish or UK infrastructure problem, which has the potential to impact on Irish gas supplies. Consequently, the CRU, as the designated Competent Authority, will declare an early warning based upon one or more of the following scenarios:

- information provided by GNI to the CRU, which in the CRU's opinion warrants declaration of an early warning;
- an announcement and/or statement by the GCG of potential threats to the security of energy supply in Europe, which in the CRU's opinion warrants the declaration of an early warning in Ireland;
- an announcement and/or statement by BEIS of potential threats to the security of energy supply in the GB, which in the CRU's opinion warrants the declaration of an early warning in Ireland;
- the issuance of a Margins Notice or Gas Deficit Warning (GDW) in the UK by National Grid, which in the CRU's opinion warrants the declaration of an early warning in Ireland; and

[6] The declaration of a crisis level (i.e. early warning, alert and emergency) refers to the scenario whereby the CRU is responsible for informing the EU Commission of an emergency. The NGEM shall still be required to declare an emergency in accordance with the NGEP. The declaration of a crisis level by the CRU may take the form of a written notification to the EU Commission via the GCG email circulation list, or any other communication method deemed appropriate by the CRU.

- any other scenario, which in the CRU's opinion requires the declaration of an early warning.

### 1.5.2 Alert

An 'alert' is declared where a supply disruption or exceptionally high gas demand occurs, resulting in a significant deterioration of the supply situation, but can be addressed through the utilisation of market-based measures. This could be as a result of an escalation of an early warning situation, or an event as outlined above at early warning level but with a higher likelihood of impacting on gas supplies. At this crisis level it is anticipated that there are market impacts (e.g. higher NBP/IBP prices) but that the market is capable of coping with the event. The issuance of an alert in Ireland by the CRU, as the designated Competent Authority, will be based upon one or more of the following scenarios:

- information provided by GNI to the CRU, which in the CRU's opinion warrants the declaration of an alert;
- an announcement and/or statement by the GCG, which in the CRU's opinion warrants the declaration of an alert in Ireland;
- an announcement and/or statement by BEIS, which in the CRU's opinion warrants the declaration of an alert in Ireland;
- the issuance of a Margins Notice or Gas Deficit Warning in the UK by National Grid, which in the CRU's opinion warrants the declaration of an alert in Ireland; and
- any other scenario, which in the CRU's opinion requires the declaration of an alert.

### 1.5.3 Emergency

An 'emergency' is declared in the event of exceptionally high gas demand, significant supply disruption or other significant deterioration of the supply situation and in the event that all relevant market-based measures have been implemented but the supply of gas is insufficient to meet the remaining gas demand so that non-market-based measures have to be additionally introduced with a view, in particular, to safeguarding gas supplies to protected customers in accordance with Article 6 of the Regulation. At this crisis level it is necessary for the NGEM to take control and implement GNI's NGEP.

The declaration of an emergency in Ireland by the CRU, as the designated Competent Authority, will be based upon one or more of the following scenarios:

- information provided by the NGEM to the CRU, which in the CRU's opinion warrants the declaration of an emergency;

- an announcement and/or statement by the GCG, which in the CRU's opinion warrants the declaration of an emergency in Ireland;
- an announcement and/or statement by BEIS, which in the CRU's opinion warrants the declaration of an emergency in Ireland;
- the issuance of a Margins Notice or Gas Deficit Warning in the UK by National Grid, which in the CRU's opinion warrants the declaration of an emergency in Ireland;
- an announcement and/or statement by the European Commission that a regional or Union emergency has been declared in accordance with Article 12 of the Regulation; and
- any other scenario, which in the CRU's opinion requires the declaration of an emergency.

## 1.6 Related Documents

I. Ireland's 2022 National Risk Assessment;
II. Regulation (EU) 2017/1938 concerning measures to safeguard the security of gas supply, as amended.
III. Ireland's 2023-27 National Preventive Action Plan - Gas;

# 2. Measures to be adopted per Crisis Level

Ireland's Preventive Action Plan examined the feasibility of various market and non-market-based measures and their immediate feasibility in terms of addressing a gas supply crisis in Ireland. This section examines the current market and non-market-based measures that were identified as feasible within the Preventive Action Plan.

## 2.1 Market-based Measures

Article 9(3) specifies that "the preventive action plan shall be based primarily on market-based measures and shall not put an undue burden on NGUs, or negatively impact on the functioning of the internal market in gas." A non-exhaustive list of market-based supply side and demand side measures is presented in Table 3: Market-based measures, which the CRU as the Competent Authority takes into account in order to improve security of gas supplies.

| Supply Side Measures | Demand Side Measures |
|---|---|
| Increased production flexibility | Fuel switching |
| Facilitating the integration of gas from renewable energy sources | Use of interruptible contracts |
| Commercial gas storage | Voluntary firm load shedding |
| LNG terminal capacity | Increased efficiency |
| Diversification of gas supplies | Increased use of renewable energy sources |
| Reverse flows | |
| Coordinated dispatching by TSO | |
| Use of long-term and short-term contracts | |
| Investment in infrastructure | |
| Contractual arrangements to ensure gas supply | |

**Table 3: Market-based measures**

In the event that an alert is declared as a result of a potential shortage of gas supplies in the UK, it is likely that the gas price at the National Balancing Point (NBP) will increase. This should result in the maximisation of indigenous Irish gas production on a voluntary basis as the market responds to the gas price. If the alert is due to an infrastructure problem in Ireland, there may not be an impact on the NBP. However, prices at the Irish Balancing Point (IBP) may increase, which may incentivise the market to react. Nonetheless, it should be noted that the IBP has lower levels of liquidity than the NBP and that indigenous production is typically maximised on a daily basis.

### 2.1.1 Market-based Supply Side Measures

In the event of such a severe weather event the presence of gas flows from the Corrib gas field would help limit any impact.

Given Ireland's geographical location, on the periphery of Europe, measures such as reverse flows and coordinated dispatching are not feasible supply side market-based measures. Furthermore, the use of long term and short-term contracts do not protect Ireland against low supply in the UK, or major infrastructure risks. However, it should be noted that Ireland's connection to the highly liquid NBP trading hub can result in market-based pricing signals to industrial customers at times of supply shortage.

It is expected that biomethane could play a significant role in diversity of gas supplies in the future. In respect of this, in 2018, the CRU approved amendments to the GNI connections policy which facilitate the connection of renewable natural gas facilities to the natural gas network.

Gas from renewable resources (e.g. biogas) is still in its early stages of development in Ireland. However, the first renewable gas injection facility in Ireland at Cush, Co. Kildare opened in June 2020. The Network Entry Facility for this project is initially injecting 36,000 mWh of biomethane and acts as a template for following project designs.

### 2.1.2 Market-based Demand Side Measures

*Fuel Switching as a market-based demand side measure*

With an average of 51% of gas in Ireland being used for power generation in 2020, Ireland currently utilises fuel switching as a non-market-based demand-side measure for managing the gas system and protecting smaller, vulnerable and priority gas customers. In 2009, the CRU issued a Decision Paper – *Secondary Fuel Obligations on Licensed Generation Capacity in the Republic of Ireland* (CER/09/001). This paper specifies the level of primary and secondary fuel stocks electricity generators are required to maintain. Since 2009, significant developments have taken place within Ireland's electricity and gas markets including increased renewable generation, the commissioning of the East West Interconnector (EWIC), and production from the Corrib gas field.

In 2019, Generator Performance Incentives (GPI) were introduced which penalises generation units for unavailability on secondary fuel. Any charges collected via this mechanism are used by the TSO to offset Dispatch Balancing Costs. In August 2022, the GPI for Secondary Fuel

Availability was raised by 50% and adjusted for inflation for the tariff year 2022/23, from €0.03 / MWh to €0.05 / MWh[7].

With regard to fuel switching as a market-based measure, CRU previously consulted on whether related market-based demand side measures could be introduced to address a gas shortage. EirGrid noted that such market measures should not be introduced to address a gas shortage in the interests of safeguarding the power system. It noted that while fuel switching provisions are in place in accordance with CER/09/001, it should only be considered as a short term emergency response measure due to the increased risk of electricity outages if fuel switching fails, and that the need for fuel switching must be co-ordinated by the gas and electricity system operators, as required.

*Third Party Access Services as a market-based demand side measure*

Article 14 of EU Regulation 715/2009 requires that TSOs provide both firm and interruptible third-party access services. In 2012, the CRU consulted on introducing an interruptible capacity product at entry and exit points. In respect of interruptible at exit, there was no great support for this product, from respondents to the consultation. At the time, it was considered that given that capacity congestion at the exit was unlikely, the price difference between a firm and interruptible product would be negligible, and hence market demand would be negligible.

## 2.2 Non-Market-based Measures

In the event that the market-based measures are not sufficient to meet demand it will be necessary to resort to the utilisation of non-market-based measures. In this circumstance the CRU may declare an emergency crisis level. At this stage the NGEM will then declare an emergency of GNI's NGEP which provides for some non-market-based measures. Specifically, this will involve the following steps:

1. Maximisation of the use of line-pack and storage (if present) on the network.
2. An instruction to gas production facilities and storage to maximise indigenous gas supplies (if available).
3. If the system cannot be rebalanced as a result of these steps firm load shedding of the LDM sector will commence.
4. GNI will initiate progressive firm load shedding of the DM and NDM sectors on behalf of the NGEM.

[7] Harmonised Other System Charges Recommendations Paper – EirGrid (2022)

5. In the event that the supply/demand imbalance is deteriorating, the NGEM will escalate the emergency, and commence gas allocations and isolations.

The detailed steps of this emergency stage are set out in GNI's NGEP.

In terms of storage and maximising production, Ireland currently does not have storage facilities and the indigenous Corrib gas field typically produces at maximum output. The Corrib gas field met approximately 17% of Ireland's peak day gas demand in 2021/22.

Fuel switching represents the most immediate non-market-based measures that can be utilised to ensure gas security of supply. Power stations in Ireland comprise 51% of the gas demand and can be instructed by EirGrid to run on a secondary fuel in order to prevent or respond to a gas emergency situation. Arrangements are currently in place, which ensure that gas generators in Ireland are able to switch from their primary fuel to their secondary fuel while operating continuously and run on their secondary fuel for up to 5 days. Accordingly, in May 2020, the gas and electricity TSOs (GNI and EirGrid) updated the Joint Procedure for the Control of Emergencies. This procedure sets out the steps to be followed by the TSOs in a natural gas emergency where gas-fired power stations must switch over from its primary fuel to its secondary fuel.

The secondary fuel capability includes the following measures:

- Electricity generating plants whose primary fuel is gas are required to be able to run on a secondary fuel,
- Such plants must also ensure that sufficient stocks of secondary fuels are held on site,
- Electricity generating plants whose primary fuel is not gas (such as oil and coal fired plants) are required to hold additional primary fuel in storage, and;
- EirGrid monitor the capability of generators and have commenced a schedule of periodic planned tests.

Analysis of GNI power demand models determined that there would be approximately 13 gas plants in merit on a peak day. EirGrid have advised that a switch to secondary fuels at all gas plants would require 8-9 hours to complete. Therefore, to safely switch to back up fuel in a controlled manner, a large volume of gas is required. Further details on this are provided in the National Preventive Action Plan for Ireland.

Ireland also has a Gas and Electricity Emergency Planning (GEEP) group. This group is concerned with the interactions between the gas and electricity sectors and will focus on short term issues relating to security of supply and emergencies in electricity and gas. The GEEP may

also encompass some longer term and wider energy/emergency policy issues, which may emerge and be of relevance to the gas and electricity sectors. Communications between the gas and electricity sectors is also within the remit of the group.

Daily metered (DM) customers could also provide demand side response to a potential emergency.

In the event of loss of supply at Moffat the linepack in IC1 and IC2 could supply the Irish demand on a 1-in-50 winter for five days. This includes an allowance of gas to enable fuel switching of a number of power stations. It should be noted that this does not provide for supply to NI through the SNP, which is connected to IC2.

## 2.3 Gas Demand Reduction Plan

Council Regulation (EU) 2022/1369 on coordinated demand-reduction measures for gas was adopted by the Council of the European Union on 5 August 2022 with the aim of improving the coordination framework for national gas demand reduction measures in case of a severe disruption of gas supplies from Russia. Regulation (EU) 2022/1369 requires Member States to use their best efforts to reduce their gas demand by 15% from 1st of August 2022 to 31st of March 2023. The 15% reduction is based on a Member States' average gas consumption from August to March during the five consecutive years prior to the introduction of this Regulation. The Regulation provides Member States with the freedom to choose the most appropriate measures to reduce their gas demand. However, the measures chosen should be clearly defined, transparent, proportionate, non-discriminatory, and verifiable. The Regulation also urges Member States to think about measures that affect customers other than protected customers.

The average gas demand in Ireland from August to March for 2017/18 to 2021/22 was 38,603 GWh. If gas demand was to reduce by 15% this would result in a reduction of 5,790 GWh. Over half of the gas demand in Ireland is in the power generation sector and gas fired generation provides flexibility to the Irish electricity system as it backs up wind energy. Another 25% of Irish gas demand comes from NDM domestic and commercial customers. All NDM customers are protected as per the Preventive Action Plan. In addition, there are a number of DM customers that are priority customers such as hospitals, nursing homes and high security prisons that are also considered as protected customers.

With consideration for the above, the measures for gas demand reduction for Ireland under Regulation 2022/1369 are set out in Table 4.

| # | Gas Demand Reduction Measure |
|---|---|
| **1** | Specified non gas fired power generation units to run at maximum available capacity – only to be used in the case of a Union Alert state |
| **2** | Upper cap on heating temperatures to be placed on public and commercial buildings |
| **3** | TSO own-use gas to be reduced |
| **4** | Enhanced messaging to all customers from GNI as gas TSO to be developed |
| **5** | Information campaigns targeted at reducing energy usage to be developed and launched |

**Table 4: List of voluntary gas demand reduction options**

Ireland will continually monitor and update this plan, as appropriate.

## 2.4 Financial Compensation Measures

The NGEM may issue directions to NGUs regarding the production, use, supply, shipping, storage, transmission and distribution of natural gas in order to respond to a natural gas emergency. However, in terms of compensating NGUs for costs incurred during an emergency (when complying with directions of the NGEM), the Irish Code of Operations only deals with the offtake of gas belonging to another shipper. Specifically, in the event of an Emergency, if a shipper's gas offtake is reduced at an exit or supply point, and off taken by another shipper, the latter shipper is required to reimburse the former shipper, via the TSO, for this gas.

Following the UK's exit from the EU, Ireland no longer has a directly connected Member State to engage for solidarity provisions under Article 13 of the Regulation. If required, the CRU will support DECC in the establishment of future solidarity provisions via a third country as provided for under Article 13(2). Such solidarity measures would be in addition to the established emergency management measures that are in place between Ireland and the UK.

## 2.5 Cyber Security

GNI has a responsibility as the network operator to ensure the network is operated safely, complies with all required legislative requirements, minimises impacts to stakeholders and the environment and operates efficiently.

GNI classification as an Operator of Essential Services (OES) under the Directive on security of network and information systems[8] (NIS Directive) means the legislative requirements for operating the network have been expanded to explicitly include resilience to cyber-attacks and reporting of cyber incidents. This NIS Directive mandates that OES must:

a) *"take appropriate and proportionate technical and organisational measures to manage the risks posed to the security of the network and information systems which it uses in its operations";*

b) *"take appropriate measures to prevent and minimise the impact of incidents…with a view to ensuring the continuity of the provision by it of those services"*;

c) *"The measures taken shall ensure, having regard to the state of the art, a level of security of network and information systems appropriate to the risks posed";* and

d) *"Operators of Essential Services must notify the competent authority about certain types of security incidents within 72 hours of them becoming aware of that incident".*

It is the intent of GNI to:

a) conform to the IEC-62443-3-3 security capabilities at the security level ("SL-3") for critical/vulnerable zones and SL-2 security level ("SL-2") for non-critical zones;

b) ensure the business's capabilities mature across the five key functions of NIS Directive namely Identify, Protect, Detect, Respond and Recover

c) reach a NIS Directive 'repeatable' security maturity rating on all remediated installation by building out a compliance control program in line with the Irish National Cyber Security Centre (NCSC) recommendations for the five key functions; and

d) look to converge Information Technology (IT)/Operational Technology (OT), teams, policies and processes where appropriate.

GNI has a number of managed service agreements in place with key security partners to provide resilience and defensive capabilities, in order to mitigate against the main attack vectors today including ransomware. Key investments over several years include the following delivered initiatives:

- Enhanced security monitoring managed service 24x7
- Increased perimeter and cloud defences
- Expanded threat & vulnerability management programme
- Increased cyber & behavioural awareness campaigns

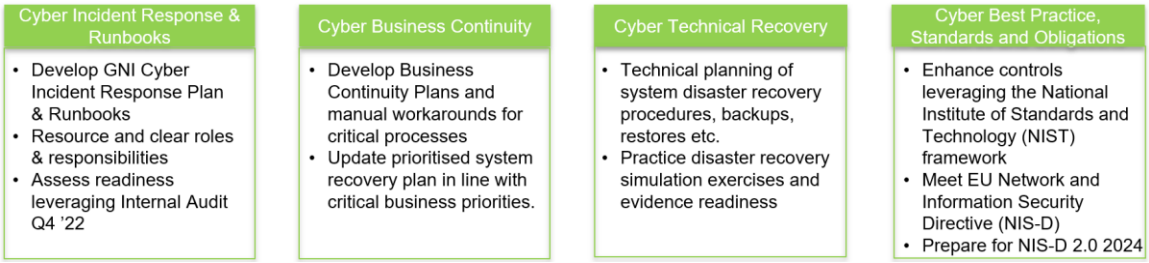
[8] Directive (EU) 2016/1148 of the European Parliament and of the Council of 6 July 2016 concerning measures for a high common level of security of network and information systems across the Union

- Established OT Cyber Program aligned to industry standard frameworks
- Advanced artificial intelligence detection capabilities
- Enhanced cyber resilience testing

GNI has well established crisis management and business continuity frameworks, but considering the scale of recent ransomware attacks, GNI has undertook a full review of its cyber resilience, cyber posture and capability to respond and recover from a cyber triggered business disruption whilst continuing to deliver business critical processes.

The review included a ransomware breach assessment, ransomware discovery assessment and a business continuity resilience assessment identifying critical processes across the business and touchpoints with systems. The ransomware breach and discovery assessments identified robust security controls are in place, while the business continuity resilience assessment and remediation works are currently in progress and is expected to continue through 2022 and beyond.

The Resilience Response & Recovery Programme is set to deliver the following:




Other key risks that GNI are currently focussed on addressing include:

- Implementing additional controls across all environments to limit east-west traffic in order to limit the ability of a potential ransomware infection moving laterally within that network perimeter
- Enhancing the cyber maturity and controls of the GNI Engineering Technology (ET) environment to a similar level that is currently in place across the IT and OT environments
- Assigning clear roles and responsibilities in relation to all our cyber controls in line with NIS Directive obligations, and ensuring that cyber response/recovery plans are updated to reflect this
- Ensuring continued funding is made available over the forthcoming price control period to enable ongoing investment in new security systems, resources, processes and controls (including providing evidence of operation of controls)

- Reviewing our cyber insurance coverage considering the increasing cyber threat profile and frequency of cyber related incidents

## 2.6 Measures and procedures per Crisis level

Section 1.5 presented the high-level measures and procedures applicable to each crisis level. While that section endeavours to provide an accurate description of the procedures to be followed during a crisis, the CRU, as the designated Competent Authority, reserves the right to deviate from the outlined procedures in the event of exceptional circumstances, and shall inform the European Commission, in accordance with 11(4) of the Regulation.

## 2.7 Specific Measures for Electricity and District Heating

Specific measures and actions to mitigate the likely impact of a disruption of gas supply in the electricity sector are agreed between GNI and the electricity TSO EirGrid. The detail on these measures is described in the NGEP and in procedures agreed between the gas and electricity TSOs.

The impact of a disruption of gas supply in the district heating sector is minimal. Ireland has only a few small-scale district heating networks contributing less than 1% of the total heat used[9]. Additionally, district heating schemes are included in the definition of protected customers in the Preventive Action Plan.

It is expected that the use of district heating in Ireland will increase over the next few years. The Climate Action Plan 2021 aims to deliver up to 2.7 TWh of district heating by 2030. The CRU is a member of the District Heating Steering Group, which was set up under the Climate Action Plan and is tasked with coordinating the rollout of policies and measures to support district heating in Ireland.

[9] District Heating and Cooling: Spatial Analysis of Infrastructure Costs and Potential in Ireland – SEAI (2022)

# 3. Roles, Responsibilities and Reporting Obligations

In order to ensure transparency and accountability during a gas security of supply crisis, this section identifies the relevant parties involved, and their respective responsibilities at an early warning, alert, and emergency crisis level.[10]

## 3.1 Early Warning

Table 5: **Roles and Responsibilities – Early Warning Level**outlines the general roles and responsibilities of all parties involved at an early warning crisis level.

| Participant | Role & Responsibilities |
|---|---|
| **CRU** | • Determine whether an early warning should be declared in Ireland and declare an early warning if necessary[11].<br>• Confirm the contact information for the CRU Representative and the emergency team.<br>• Provide input into the development and amendment of the SITREP.<br>• Provide input into the development and amendment of the Action Plan.<br>• Advise Crisis Manager that an early warning has issued, and the rationale for the declaration if necessary.<br>• Inform DECC as lead Government Department that an early warning has been declared in Ireland and the rationale for the declaration, if necessary.<br>• Inform the EU Commission via the GCG that an early warning has been declared in Ireland and the rationale for the declaration, if necessary.<br>• Provide updates to the GCG for the duration of the early warning. |

[10] The obligations on NGUs and relevant market participants are detailed within the Code of Operations, and their respective licences. Consequently, the obligations contained within the Code of Operations and the relevant licences, take precedence over any information contained within this Emergency Plan.

[11] The declaration of a crisis level (i.e. early warning, alert and emergency) refers to the scenario whereby the CRU is responsible for informing the EU Commission of an emergency under the Regulation. The NGEM shall still be required to declare an emergency in accordance with the NGEP. The declaration of a crisis level by the CRU may take the form of a written notification to the EU Commission via the GCG email circulation list, or any other communication method deemed appropriate by the CRU.

| | |
|---|---|
| | • Implement NGEM Directions.<br>• Decide whether to remove, maintain or escalate early warning. |
| **DECC** | • Place NECG on stand-by or may decide to convene a meeting of the NECG.<br>• Liaise with departments in NI and GB. |
| **Crisis Manager** | • The Crisis Manager will provide technical liaison between the NGEM, the NECG and the GCG.<br>• The role may include provision of technical updates at NECG press briefings.<br>• Liaise with the NGEM as required. |
| **GNI** | • Advise NGUs that an early warning has been declared by the CRU.<br>• Provide situation updates to the Crisis Manager.<br>• Monitor the quality specification of gas being delivered at an entry point to the GNI network and implement the relevant provisions in the event of a gas quality excursion.<br>• Implement all directions of the NGEM.<br>• Advise NGUs that early warning crisis declaration is revoked. |
| **Shippers/ Suppliers** | • Notify registered industrial gas customers of early warning if appropriate. |

**Table 5: Roles and Responsibilities – Early Warning Level**

## 3.2 Alert

Table 6 outlines the general roles and responsibilities of all parties involved at an alert crisis level.

| Participant | Role & Responsibilities |
|---|---|
| **CRU** | • Determine whether an alert should be declared in Ireland and declare an alert if necessary.<br>• Confirm the contact information for the CRU Representative and the emergency team. |

| | |
|---|---|
| | • Provide input into the development and amendment of the SITREP.<br>• Provide input into the development and amendment of the Action Plan.<br>• Inform DECC as lead Government Department that an alert has been declared in Ireland and the rationale for the declaration if necessary.<br>• Inform the EU Commission via the GCG that an alert has been declared in Ireland and the rationale for the declaration if necessary.<br>• Provide updates to the GCG and the Crisis Manager for the duration of the alert.<br>• Implement NGEM directions.<br>• Decide whether to remove, maintain or escalate alert.<br>• Monitor the effectiveness of Action Plan and report to the GERT as appropriate.<br>• Decide whether to remove, maintain or escalate an alert. |
| **DECC** | • Place NECG on stand-by or may decide to convene a meeting of the NECG.<br>• Liaise with departments in NI and GB, as required. |
| **Crisis Manager** | • The Crisis Manager will provide technical liaison between the NGEM, the NECG and the GCG.<br>• The role may include provision of technical updates at NECG press briefings.<br>• Liaise with the NGEM as required. |
| **GNI** | • Advise NGUs that an alert has been declared by the CRU.<br>• Monitor the quality specification of gas being delivered at an entry point to the GNI network an implement the relevant provisions in the event of a gas quality excursion.<br>• Provide information to Crisis Manager as required.<br>• Advise NGUs when alert declaration is revoked.<br>• Provide updates to NGUs on alert. |
| **NGEM** | • Implement the NGEP and declare an Alert. |

| | |
|---|---|
| | • Establish the GERT confirming membership, location, communication, and time/frequency of meetings.<br>• Liaise with the Crisis Manager who will provide technical liaison between the NGEM, the NECG and the GCG. In conjunction with the GERT develop a SITREP.<br>• Approve the SITREP and agree the circulation list for use by the GNI Support Team.<br>• Advise the GERT of any actions undertaken prior to the first meeting.<br>• In conjunction with the GERT develop an Action Plan for responding to the emergency.<br>• Approve the Action Plan and prepare the necessary directions for the GNI Support Team to issue.<br>• Through the GERT monitor the effectiveness of the Action Plan.<br>• Ensure that a log of the emergency is maintained and that all relevant documentation is secured. |
| **EirGrid** | • Attend the GERT and provide information on electricity system to the NGEM.<br>• Provide the electricity industry input into the development and amendment of the Action Plan.<br>• Implement NGEM directions.<br>• Manage any required switching to alternative supplies by gas-fired power generators and/or electricity demand management.<br>• Monitor the effectiveness of Action Plan and report to the GERT as appropriate. |
| **Shippers/ Suppliers** | • Notify registered industrial gas customers of alert.<br>• Implement market-based demand side measures, if any. |
| **Holders of a Petroleum Lease** | • Implement market-based measures, if possible. |
| **Storage/LNG Operators** | • Implement market-based measures, if possible. |

**Table 6: Roles and Responsibilities – Alert Level**

## 3.3 Emergency

Table 7 outlines the general roles and responsibilities of all parties involved at an emergency crisis level.

| Participant | Role & Responsibilities |
|---|---|
| **CRU** | • Determine whether an emergency should be declared in Ireland and declare an emergency if necessary.<br>• Confirm the contact information for the CRU Representative and the emergency team.<br>• Provide input into the development and amendment of the SITREP.<br>• Provide input into the development and amendment of the Action Plan.<br>• Inform the EU Commission via the GCG that an emergency has been declared in Ireland and provide updates until issue is resolved.<br>• Inform DECC as lead Government Department that a crisis level has been declared in Ireland and rationale for the declaration, if necessary.<br>• Implement NGEM Directions.<br>• Monitor the effectiveness of Action Plan and report to the GERT as appropriate.<br>• Authorise any deviations to this plan during an emergency.<br>• Provide all relevant information, logs and documents to the NGEM for the post emergency review and report.<br>• Appoint persons nominated by GNI to be Authorised Officers for the purposes of ensuring compliance with a direction of the NGEM per S.I. No. 336 of 2013.<br>• Seek the power of the High Court where necessary to ensure compliance with a direction of the NGEM.<br>• Decide whether to remove or maintain the emergency as per the Regulation.<br>• Prepare final report for the GCG if appropriate. |
| **DECC** | • Convene and chair NECG.<br>• Liaise with departments in NI and GB. |

| | |
|---|---|
| | • Participate in the GERT.<br>• Inform Government Departments as appropriate.<br>• Co-ordinate National Media response. |
| **Crisis Manager** | • The Crisis Manager will provide technical liaison between the NGEM, the NECG and the GCG.<br>• The role may include provision of technical updates at NECG press briefings.<br>• Liaise with the NGEM as required. |
| **NGEM** | • Declare NGEP Emergency.<br>• Confirm NGEM contact information for all responders involved in the emergency.<br>• Establish the GERT confirming membership, location, communication, and time/frequency of meetings.<br>• Liaise with the Crisis Manager who will provide technical liaison between the NGEM, the NECG and the GCG.<br>• In conjunction with the GERT develop a SITREP.<br>• Approve the SITREP and agree the circulation list for use by the GNI Support Team.<br>• Advise the GERT of any actions undertaken prior to the first meeting.<br>• In conjunction with the GERT develop an Action Plan for responding to the emergency.<br>• Approve the Action Plan and prepare the necessary directions for the GNI Support Team to issue.<br>• Through the GERT monitor the effectiveness of the Action Plan.<br>• Amend and reissue the SITREP and Action Plan as required during the emergency.<br>• Ensure that a log of the emergency is maintained and that all relevant documentation is secured.<br>• Declare the end of an emergency in accordance with the NGEP using the approved template.<br>• Inform the Transporter of the end of the emergency and plan for a review of the incident and the preparation of a report. |

| | |
|---|---|
| **GNI** | • Determine if it is necessary to declare an emergency based on information provided by GNI, EirGrid or CRU and notify the NGEM accordingly.<br>• Monitor the quality specification of gas being delivered at an entry point to the GNI network an implement the relevant provisions in the event of a gas quality excursion.<br>• Monitor the effectiveness of the implementation of the NGEP throughout the emergency.<br>• Participate in a post emergency review highlighting issues and lessons learnt and prepare a report for the CRU (if requested).<br>• Determine if it is appropriate to declare the end of an emergency and notify the NGEM accordingly.<br>• Implement all directions of the NGEM. |
| **EirGrid** | • Provide information on the impacts on the electricity industry of the emergency to the NGEM.<br>• Confirm the contact information for the EirGrid representative and the emergency team.<br>• Provide the electricity industry input into the development and amendment of the SITREP.<br>• Ensure that all relevant sectors of the electricity industry are briefed on the emergency.<br>• Provide the electricity industry input into the development and amendment of the Action Plan.<br>• Implement NGEM directions.<br>• Manage any required switching to alternative supplies by gas-fired power generators and/or electricity demand management.<br>• Monitor the effectiveness of Action Plan and report to the GERT as appropriate.<br>• Provide all relevant information, logs and documents to the NGEM for the post emergency review and report. |
| **ESB Networks** | • Manages the operations of the local electricity supply networks during a gas supply emergency under the direction of EirGrid. |

| | |
|---|---|
| **Shippers/ Suppliers** | • Notify registered industrial gas customers of emergency.<br>• Comply with directions of NGEM. |
| **Holders of a Petroleum lease** | • Comply with directions of the NGEM. |
| **Storage/LNG Operators** | • Comply with directions of the NGEM. |
| **Consumers** | • Gas and electricity consumers respond to demand reduction requests from the NGEM and/or the electricity network operators. |
| **Generators** | • Respond to requests from EirGrid to reduce demand or switch fuel supplies. |
| **Emergency Services** | • Emergency Services/Local Authorities in Ireland manage the social consequences of the gas supply emergency. |

**Table 7: Roles and Responsibilities - Emergency Level**

## 3.4 Reporting Obligations during an Alert and Emergency

### 3.4.1 NGUs' reporting obligations to Crisis Manager:

The Crisis Manager requires information from all Shippers/Producers/Storage Operators to enable the best utilisation of all facilities in the event of an alert or emergency, including:

- forecast deliveries at all entry points;
- maximum available deliveries at all entry points;
- maximum available indigenous gas production;
- forecast deliveries from storage services (if available); and
- maximum available deliveries from all storage services (if available).

It is the responsibility of the Shippers/Producers/Storage Operators to provide such information to the Crisis Manager on a regular basis when requested.

Additionally, GNI shall provide information on:

- available gas storage days (if present);
- available indigenous gas production;
- number of days line-pack available; and
- consumption of gas fired power stations at time of crisis declaration.

### 3.4.2 NGEM reporting obligations to CRU as Competent Authority:

In order to ensure compliance with Article 14(1) of the Regulation, the NGEM shall provide, daily, the following information to the CRU during an emergency:

- daily gas demand and supply forecasts for the following 3 days;
- daily flow of gas at all cross-border entry and exit points as well as all points connecting a production facility, a storage facility (if present) or an LNG terminal (if present) to the network, in mcm/d; and
- the period, expressed in days, for which it is expected that gas supply to the protected customers can be ensured.

### 3.4.3 CRU/Competent Authority reporting obligations to EU Commission:

In the event of a Union or regional emergency, the CRU shall provide the following information, if requested, to the EU Commission:

- information requirements as set out in Article 14(1) of the Regulation;
- information on the measures planned to be undertaken and already implemented to mitigate the emergency, and information on their effectiveness;
- the requests made for additional measures to be taken by other Competent Authorities; and
- the measures implemented at the request of other Competent Authorities.

Additionally, following the end of an emergency in Ireland, the CRU shall, as soon as possible and at the latest 6 weeks after the lifting of the emergency, provide to the EU Commission a detailed assessment of the emergency and the effectiveness of the implemented measures, including an assessment of the economic impact of the emergency, the impact on the electricity sector, and the assistance provided to, and/or received from the Union and its Member States. In order to complete such a report, the CRU will require input from EirGrid, GNI, the Crisis Manager and the NGEM.

# 4. Measures for undue consumption by non-protected customers

To prevent the undue consumption of gas by customers who are not protected customers the NGEP describes the role of Authorised Officers who are appointed to take any or all of the following actions to ensure compliance with the instructions of the NGEM in accordance with Statutory Instrument S.I. No. 336 of 2013.

The Authorised Officer may:

- At any time, enter land or premises in order to take any action necessary to ensure compliance with the instruction.
- Require any person on the land or premises to do all such things as are in his or her opinion necessary or expedient for the purpose of ensuring compliance with the instruction.
- Require the person in charge of the land or premises to give the Authorised Officer such assistance and facilities within the person's power or control as are reasonably necessary to enable the Authorised Officer to exercise any of his or her powers.
- Require the person in charge of the land or premises to give the Authorised Officer such information as may be reasonably required for the purpose of his or her powers.
- Require a person on the land or premises to follow any procedure for the purposes of any action necessary to ensure compliance with the instruction.

Any person who obstructs or impedes an Authorised Officer in the exercise of his or her duties commits an offence which may lead to fine or imprisonment. The CRU shall be informed in the event of the NGEM issuing an instruction to an Authorised Officer to carry out any of the actions listed above.

It may be necessary for the NGEM to seek government support to assist with the management of a Natural Gas Emergency; examples are described below:

- To compel organisations or individuals to carry out the directions of the NGEM given in accordance with the NGEP.
- To seek the support of other government departments and agencies, including the civil and military authorities, to assist with the management of the emergency.
- To interface with external governments and agencies; including the NI Office, UK Government and the EU Gas Coordination Group, as required.

Depending on the nature of the emergency it may be necessary to convene the EPON, consisting of media and communication experts from the gas and electricity TSO's, CRU and DECC. The purpose of the EPON is to ensure the delivery of a consistent national media in the event of an emergency. Where an emergency is likely to impact electricity and gas supplies to protected customers the use of public appeals to reduce consumption will be coordinated centrally by the EPON. Traditional broadcast methods (e.g. TV, radio) and social media channels will be used to communicate the public appeals.

If the above support is required, the NGEM make the request to the CRU (in writing where time permits) and will detail the support required indicating specific requirements and desired timescales for delivery. The CRU will liaise with the lead government department (DECC) and other government departments and/or agencies as necessary. Requests for support will be discussed at the GERT.

# 5. Emergency Tests

Emergency scenarios are unique and dynamic in nature depending on the scale and potential impact of the emergency and the real time response can vary depending on the nature of the emergency. Appendices 2 to 4 set out the steps and actors involved for a real time response with the significant mitigation measures for a gas deficit emergency being: (a) load shedding of gas-fired electricity generators and (b) a timeframe for secondary fuel switching that has been agreed between GNI and the electricity TSO EirGrid to take effect.

GNI's NGEP is tested annually and learnings and recommendations from emergency tests are reviewed and incorporated where necessary into revised plans. Recent tests of the NGEP include:

- 2019 Exercise Arctic
- 2020 Exercise Baltic
- 2021 Exercise Celsius

The 2021 emergency exercise titled 'Exercise Celsius' was carried out in October 2021 and simulated a natural gas emergency arising from a progressively worsening gas supply scenario during a period of high demand coinciding with a severe weather event. The severe weather event resulted in record domestic gas demand in the Republic of Ireland. The supply deficit was based on restricted imports due to supply deficits in Great Britain (GB). An integral part of the NGEP is load shedding of gas-fired power generation which was simulated in conjunction with the electricity TSO (EirGrid) in order to restore the gas supply / demand imbalance. This load shedding was facilitated by secondary fuel switching of gas-fired power generators and was managed by EirGrid.

Exercise Celsius successfully demonstrated that GNI and industry was able to respond to the scenario tested in accordance with the emergency arrangements described in the NGEP.

GNI also participates in the annual emergency exercises of the Network Emergency Coordinator in GB.

On 9 and 16 September 2022, an exercise simulating a joint energy emergency, Exercise Dara, was held for the first time. It involved all of the primary actors listed in Section 1.2 of this plan along with representatives from a range of organisations including emergency services, industry and education.

The exercise simulated a gas emergency caused principally by a request from GB to reduce gas demand by 20%, which caused an emergency state on the electricity system. In this scenario, a

Joint Energy Emergency Response Team is formed, comprising of the same organisations the GERT but led by either the gas or electricity TSO, as appropriate. This scenario triggered an escalation to a national emergency and activation of the NECG. This Group consists of representatives from all Government Departments and key supporting agencies.

# 6. Cooperation Mechanisms

Ireland is a member of the UK[12] and Norway[13] Risk Groups.

***[This section will be updated in accordance with the requirements of Articles 7 and 8 of the Regulation on completion of the Common Risk assessments]***

Details on how CRU cooperates with the European Commission via the GCG are set out in Section 1.5 of this plan.

The primary vehicle for regional co-operation on the Emergency Plan is through the UK and Ireland Gas Planning Emergency Group. This group comprises representatives from governments, regulators and TSOs of GB, Ireland and NI. The group meets twice a year and has developed a regional approach to emergency planning to ensure that the natural gas emergency operational plans of all jurisdictions work together. Ad hoc meetings can also be organised, where appropriate. This is achieved through the development of protocols between the TSOs and modifications to emergency plans identified following joint emergency exercises. These are fundamental to the management of an emergency at the three crisis levels described in the Regulation. Much of the work of this group has to date focussed on this aspect of regulatory co-operation.

In addition, the group supports government and regulatory co-operation through the adoption and development of emergency planning procedures and communication protocols for emergency management. These measures have a primary role in the early warning and alert crisis levels and seek to ensure consistency of emergency response and preparedness.

Further information on the regional interactions with NI and GB per crisis level are set out in Sections 0, 1.5.2, and 1.5.3.

[12] UK Risk Group Members: Belgium, Germany, Ireland, Luxembourg, Netherlands.
[13] Norway Risk Group Members: Belgium, Denmark, Germany, Ireland, Spain, France, Italy, Luxembourg, Netherlands, Poland, Portugal, Sweden.