



Commission for Energy Regulation
An Coimisiún um Rialáil Fuinnimh

National Gas Supply Emergency Plan 2016-18 Ireland

Decision / Information Paper

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Regulating Water, Energy and Energy Safety in the Public Interest

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Executive Summary

EU Member States are required to implement measures to safeguard security of gas supply including, *inter-alia*, 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 – NGEPlan) and the European measures concerning the security of gas supply and emergency management as provided for under Regulation 994. This Emergency Plan:

- i. contains information of the three crisis levels identified within the Regulation (i.e. “early warning”, “alert” and “emergency”);
- ii. defines the roles and responsibilities of the CER, Natural Gas Undertakings (NGUs), and other market participants at each crisis level;
- 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;¹
- iv. contains detailed procedures and measures to be followed for each crisis level, including the corresponding schemes on information flows;
- v. identifies the contribution of market-based measures for coping with situation at “alert” level, and mitigating the situation at “emergency” level;
- 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;
- vii. assesses the effects of non-market based measures and the procedures required to implement them;
- 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; and

¹ Measures and actions to mitigate the potential impact of a gas supply disruption on district heating are not applicable to Ireland.

- 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.

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Glossary of Terms and Abbreviations

Abbreviation or Term	Definition or Meaning
CER	Commission for Energy Regulation
DCCAE	Department of Communications, Climate Action and Environment
BECP	Blackstart Emergency Communications Plan
BEIS	Department of Business Energy and Industrial Strategy
DfE	Department for the Economy
EU	European Union
GB	Great Britain
GCG	Gas Co-ordination Group
GEEP	Gas Electricity Emergency Planning
GERT	Gas Emergency Response Team
GNI	Gas Networks Ireland
IBP	Irish Balancing Point
IoM:	Isle of Man
JRC:	Joint Research Centre
NBP	National Balancing Point
NCG:	National Co-ordination Group
NGEM	National Gas Emergency Manger
NGEP	Natural Gas Emergency Plan
NI	Northern Ireland
NGU	Natural Gas Undertaking
NRA	National Regulatory Authority
PSRP:	Power System Restoration Plan
PTL:	Premier Transmission Limited
TSO:	Transmission System Operator
UK	United Kingdom

Structure of Paper

The Emergency Plan is structured as follows:

- **Section 1:** Introduction.
- **Section 2:** outlines trigger mechanisms for the declaration of various crisis levels contained within the Regulation.
- **Section 3:** outlines the obligations imposed on NGUs and relevant market participants in terms of responding to, and providing information on, each crisis level.
- **Section 4:** outlines the contribution of market and non-market based measures for addressing alerts and emergency scenarios.
- **Section 5:** presents the procedures and measures applicable to each crisis level, and outlines predefined actions regarding commercial arrangements to make gas available in the event of an emergency.
- **Section 6:** describes the mechanisms for co-operating with the GB and NI.
- **Section 7:** Summary.

Related Documents

- i. GNI's Natural Gas Emergency Plan (NGEP) – [Version 4](#)
- ii. Ireland's 2016 National Risk Assessment (not publicly available) ;
- iii. Ireland's 2016 National Preventive Action Plan - Gas (CER/16/340);
- iv. Ireland's 2014 National Gas Supply Emergency Plan (CER/14/784);

1 Introduction

Pursuant to the implementation of EU Regulation 994/2010 (“the Regulation”), Member States are required to implement measures to safeguard security of gas supply including, inter-alia, the development of an Emergency Plan. The CER 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 4 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 accordance with Article 10 of the Regulation, this Emergency Plan:

- i. contains information of the three crisis levels identified within the Regulation (i.e. “early warning”, “alert” and “emergency”);
- ii. defines the roles and responsibilities of the CER, Natural Gas Undertakings (NGUs), and other market participants at each crisis level;
- 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;²
- iv. contains detailed procedures and measures to be followed for each crisis level, including the corresponding schemes on information flows;
- v. identifies the contribution of market-based measures for coping with situation at “alert” level, and mitigating the situation at “emergency” level;
- 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;

² Measures and actions to mitigate the potential impact of a gas supply disruption on district heating are not applicable to Ireland.

- vii. assesses the effects of non-market based measures and the procedures required to implement them;
- 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; 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 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 4 and 10 of the Regulation will be based on:

- an updated 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 up-dated biennially in accordance with Article 10 (2) or more frequently if the CER consider this necessary. The rationale for up-dating the Emergency Plan will be based on the Risk Assessment and the Preventive Action Plan, which also will be up-dated biennially, and any other reasons considered prudent by the CER 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 effected 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 in particular on interactions with the EU Commission via the Gas Co-ordination Group.

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 Three, in conjunction with other relevant market participants.³

- i. **The Department of Communications, Climate Action and Environment (DCCAE)** is the Government Department responsible for the formulation of energy policy, including security of energy supply.⁴ In the context of a gas emergency, DCCAE would assume the role of Lead Government Department. As Lead Department, DCCAE would be responsible for convening and chairing the National Co-ordination Group (NCG), which consists of all Government Departments and the relevant agencies. Essentially, the NCG 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 NCG would also co-ordinate the national media response and hold daily press briefings. Additionally, in terms of its interactions with Europe, the DCCAE is a member of the European Gas Co-ordination Group.

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, DCCAE may require advance briefing and/or attendance in person at the National Co-ordination Group by relevant organisations.

³ Appendix 1 provides a high level illustration of the roles and responsibilities of the primary actors involved in this Emergency Plan.

⁴ In relation to oil, DCCAE is also responsible for the development and implementation of Ireland's oil security policy, which includes contingency planning. Such contingency arrangements are reflected in DCCAE's [Oil Emergency Management Handbook](#).

- ii. **The Commission for Energy Regulation (CER)** is the Regulatory Authority for electricity and gas in Ireland. The CER has, *inter alia*, statutory responsibility for monitoring and ensuring security of gas and electricity supplies. The CER has been designated by DCCAIE as Competent Authority under Article 2.2 of the Regulation to ensure the implementation of the measures set out in the Regulation, and is also invited to attend European Gas Co-ordination Group meetings.⁵ Additionally, the CER has responsibility for the regulatory regime relating to gas and electricity safety in Ireland.

- iii. **GNI**⁶ is the gas Transmission System Operator (TSO) for Ireland with responsibility for system operation, network planning and market arrangements. The CER 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 responsible, under its licence from the CER, for the development of the NGEP, which is approved by the CER. 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, CER, EirGrid (the electricity TSO), and DCCAIE. The GERT is responsible for managing the operational response to the gas supply emergency. The CER 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 European Gas Co-ordination Group. 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 Blackstart Emergency

⁵ In accordance with SI 336 (2013) EUROPEAN UNION (SECURITY OF NATURAL GAS SUPPLY), the CER has been formally designated as Ireland's Competent Authority for the implementation of Regulation (EU) 994/2010.

⁶ In accordance with national legislation, S.I. No. 697/2007 - European Communities (Security of Natural Gas Supply) Regulations 2007, the CER appointed GNI as the NGEM. In accordance with EU Regulation 994/2010 the CER appointed GNI as the Crisis Manager.

Communications Plan (BECP), and a Power System Restoration Plan (PSRP).⁷

- v. **ESB Networks** manages the operation of the electricity distribution network in Ireland and provides the interface with the distribution network operator in Northern Ireland, Northern Ireland Electricity (NIE).
- vi. **Energy Press Officers Network (EPON)**: The EPON will consist of communication experts from DCCA, CER, 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 National Co-ordination Group (NCG) is convened, the NCG will manage the national media response.

⁷ 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.

2 Crisis Levels

Article 10(3) 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.

2.1 Early Warning

An early warning is declared⁸ when 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 the 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 CER, 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 CER, which in the CER's opinion warrants declaration of an early warning;
- an announcement and/or statement by the European Gas Co-ordination Group of potential threats to the security of energy supply in Europe, which in the CER'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 CER's opinion warrants the declaration of an early warning in Ireland;

⁸ The declaration of a crisis level (i.e. early warning, alert and emergency) refers to the scenario whereby the CER is responsible for informing the EU Commission of an emergency. The NGEM shall still be required to declare an emergency in accordance with the Natural Gas Emergency Plan. The declaration of a crisis level by the CER may take the form of a written notification to the EU Commission via the European Gas Co-ordination Group email circulation list, or any other communication method deemed appropriate by the CER.

- the issuance of a Margins Notice or Gas Deficit Warning in the UK by National Grid, which in the CER's opinion warrants the declaration of an early warning in Ireland; and
- any other scenario, which in the CER's opinion requires the declaration of an early warning.

2.2 Alert

An alert is declared when 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 CER, as the designated Competent Authority, will be based upon one or more of the following scenarios:

- information provided by GNI to the CER, which in the CER's opinion warrants the declaration of an alert;
- an announcement and/or statement by the European Gas Co-ordination Group, which in the CER's opinion warrants the declaration of an alert in Ireland;
- an announcement and/or statement by BEIS, which in the CER'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 CER's opinion warrants the declaration of an alert in Ireland; and
- any other scenario, which in the CER's opinion requires the declaration of an alert.

2.3 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. 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 CER, as the designated Competent Authority, will be based upon one or more of the following scenarios:

- information provided by the NGEM to the CER, which in the CER's opinion warrants the declaration of an emergency;
- an announcement and/or statement by the European Gas Co-ordination Group of, which in the CER's opinion warrants the declaration of an emergency in Ireland;
- an announcement and/or statement by BEIS, which in the CER'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 CER's opinion warrants the declaration of an emergency in Ireland;
- an announcement and/or statement by the European Commission that a Union Emergency has been declared; and
- any other scenario, which in the CER's opinion requires the declaration of an emergency.

3 Obligations on NGUs & Relevant Market Participants

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.⁹

3.1 Early Warning

Table 3.1 outlines the general roles and responsibilities of all parties involved at an early warning crisis level.

Table 3.1: Roles and Responsibilities – Early Warning Level

Participant	Role & Responsibilities
CER	<ul style="list-style-type: none"> • Determine whether an early warning should be declared in Ireland, and declare an early warning if necessary. • Advise Crisis Manager that an early warning has issued, and the rationale for the declaration if necessary. • Inform DCCAE as lead Government Department that an early warning has been declared in Ireland and the rationale for the declaration, if necessary. • Inform the EU Commission via the European Gas Co-ordination Group that an early warning has been declared in Ireland and the rationale for the declaration, if necessary. • Provide updates to the European Gas Co-ordination Group for the duration of the early warning. • Decide whether to remove, maintain or escalate early warning.
DCCAE	<ul style="list-style-type: none"> • Place National Co-ordination Group on stand-by or may decide to convene a meeting of the National Co-ordination Group • Liaise with departments in Northern Ireland and GB.

⁹ 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.

Crisis Manager	<ul style="list-style-type: none"> • Advise GNI that CER has declared an early warning. • Provide situation updates and requested information to the CER. • Brief DCCAE and the European Gas Co-ordination Group as appropriate. • Provide situation updates to GNI as appropriate.
GNI	<ul style="list-style-type: none"> • Advise NGU's that an early warning has been declared by the CER. • Provide situation up-dates to the Crisis Manager. • Advise NGU's that early warning crisis declaration is revoked.
Shippers/Suppliers	<ul style="list-style-type: none"> • Notify registered industrial gas customers of early warning if appropriate.

3.2 Alert

Table 3.2 outlines the general roles and responsibilities of all parties involved at an alert crisis level.

Table 3.2 Roles and Responsibilities – Alert Level

Participant	Role & Responsibilities
CER	<ul style="list-style-type: none"> • Determine whether an alert should be declared in Ireland, and declare an alert if necessary. • Advise the Crisis Manager that an alert has issued and the rationale for the declaration if necessary. • Inform DCCAE as lead Government Department that an alert has been declared in Ireland and the rationale for the declaration if necessary. • Inform the EU Commission via the Gas Co-ordination Group that an alert has been declared in Ireland and the rationale for the declaration if necessary. • Provide updates to the European Gas Co-ordination Group and the Crisis Manager for the duration of the alert. • Decide whether to remove, maintain or escalate alert. • Approve the Crisis Manager's Action Plan. • Monitor the effectiveness and/or request amendments to the Action Plan.

	<ul style="list-style-type: none"> Decide whether to remove, maintain or escalate an alert.
Crisis Manager	<ul style="list-style-type: none"> Advise GNI that an Alert has been declared by the CER. Provide an Action Plan for CER approval if required. Implement Action Plan and monitor its effectiveness. Provide situation reports to CER if appropriate, and information to the CER in accordance with the Regulation. Brief DCCAE and the European Gas Co-ordination Group as appropriate. Provide situation updates to GNI as appropriate. Produce a Closing Report for the CER if required.
DCCAE	<ul style="list-style-type: none"> Place National Co-ordination Group on stand-by or may decide to convene a meeting of the National Co-ordination Group (NCG) Liaise with departments in Northern Ireland and GB, as required.
GNI	<ul style="list-style-type: none"> Advise NGU's that an alert has been declared by the CER. Provide information to Crisis Manager as required. Advise NGU's when alert declaration is revoked. Provide updates to NGUs on alert.
Shippers/ Suppliers	<ul style="list-style-type: none"> Notify registered industrial gas customers of alert. Implement market based demand side measures, if any.
 Holders of a Petroleum Lease	<ul style="list-style-type: none"> Implement market based measures, if possible.
Storage/LNG Operators	<ul style="list-style-type: none"> Implement market based measures, if possible.

3.3 Emergency

Table 3.3 outlines the general roles and responsibilities of all parties involved at an emergency crisis level.

Table 3.3 Roles and Responsibilities - Emergency Level

Participant	Role & Responsibilities
CER	<ul style="list-style-type: none"> • Determine whether an emergency should be declared in Ireland, and declare an emergency if necessary. • Advise Crisis Manager and DCCAE that emergency has been declared. • Inform the EU Commission via the Gas Co-ordination Group that an emergency has been declared in Ireland, and provide updates until issue is resolved. • Attend GERT meeting(s). • Take appropriate action in the case of non-compliance with directions issued by the NGEM. • Decide whether to remove or maintain an emergency. • Prepare final report for the European Gas Co-ordination Group if appropriate.
ESB Networks	<ul style="list-style-type: none"> • Manages the operations of the local electricity supply networks during a gas supply emergency under the direction of EirGrid.
NGEM	<ul style="list-style-type: none"> • Implement GNI's NGEP. • Convene and chair the GERT. • Inform CER in the case of non-compliance with directions issued by the NGEM. • Co-operate with the Crisis Manager in providing situation up-dates and in preparing situation and closing reports.
Crisis Manager	<ul style="list-style-type: none"> • Liaise with the NGEM and GNI. • Liaise with the electricity TSO. • Brief the DCCAE, NCG and European Gas Co-ordination Group. • Provide technical input to the NCG press briefings. • Provide Situation Reports to CER. • Produce a Closing Report for the CER.
DCCAE	<ul style="list-style-type: none"> • Convene and chair NCG.

	<ul style="list-style-type: none"> • Liaise with departments in Northern Ireland and GB. • Participate in the GERT. • Inform Government Departments as appropriate. • Co-ordinate National Media response.
GNI	<ul style="list-style-type: none"> • Inform NGUs that an emergency has been declared. • Provide updates to NGUs on emergency. • Co-operate with Crisis Manager in developing situation reports. • Attend GERT meetings. • Provide regular updates to NGUs on emergency. • Advise NGUs that emergency has been revoked.
EirGrid	<ul style="list-style-type: none"> • Attend the GERT and provide input on electricity system impacts. • Provide information on electricity system to the NGEM. • Liaises with the NGEM on impact of emergency on electricity generation. • Undertakes load switching of power stations as required by the NGEM. • Declares electricity emergency. • Load shed electricity customers as necessary to protect the integrity of the electricity system.
GNI	<ul style="list-style-type: none"> • Provide operational services with respect to the gas supply system and implement the instructions of the NGEM. • Load shed gas customers if necessary.
Shippers/Suppliers	<ul style="list-style-type: none"> • Notify registered industrial gas customers of emergency. • Comply with directions of NGEM.
Holders of a Petroleum lease	<ul style="list-style-type: none"> • Comply with directions of the NGEM.
Storage/LNG Operators	<ul style="list-style-type: none"> • Comply with directions of the NGEM.
Consumers	<ul style="list-style-type: none"> • Gas and electricity consumers respond to demand reduction requests from the NGEM and/or the electricity network operators.

Generators	<ul style="list-style-type: none"> Respond to requests from EirGrid to reduce demand or switch fuel supplies.
Emergency Services	<ul style="list-style-type: none"> Emergency Services/Local Authorities in Ireland manage the social consequences of the gas supply emergency.

3.4 Reporting Obligations during an Alert and Emergency

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;
- forecast deliveries from storage services; and
- maximum available deliveries from all storage services.

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, the Gas TSO shall provide information on:

- available gas storage days;
- number of days linepack available; and
- consumption of gas fired power stations at time of crisis declaration.

Crisis Manager's reporting obligations to CER/Competent Authority:

In order to ensure compliance with Article 13(2) of the Regulation, the Crisis Manager shall provide, on a daily basis, the following information to the CER 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 or an LNG terminal 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.

CER/Competent Authority reporting obligations to EU Commission:

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

- information requirements as set out in Article 13(2) 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 CER 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 CER will require input from EirGrid, GNI, the Crisis Manager and the NGEM.

4 Market & Non-market Based Measures

Ireland's Preventive Action Plan examined the feasibility of various market and non-market based measures, as outlined in Annex II and III of the Regulation, 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, and could be applied within Ireland's Emergency Plan 2016-18.

4.1 Market Based Measures

Annex II of the Regulation identified a non-exhaustive list of market based supply side and demand side measures (see Table 4.1) that the relevant Competent Authority shall take into account in order to improve security of gas supplies.

Table 4.1: Market Based Measures

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	

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 supplies and storage 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.

4.1.1 Market Based Supply Side Measures

With reference to market based supply side measures, Ireland has some limited production capacity in Kinsale that can be drawn on to increase supply. Additionally, Ireland has indigenous production capacity at the Corrib gas field. It is clear from the market operation that suppliers react to market signals (i.e. high NBP prices) by increasing supplies from these indigenous sources. In the cold periods of January and December 2010 a combination of production and storage gas from Kinsale contributed 16% of Ireland total demand. Without this source of gas, the Moffat entry point would have been strained and unable to deliver the gas required to meet the demand. Additionally both interconnectors from Moffat (IC1 and IC2) were required to be in operation to deliver the quantities of gas required to meet Irish demand.

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.

Gas from renewable resources (e.g. biogas) is still in its infancy in Ireland and is used mainly for small scale Combined Heat and Power (CHP). However, it is considered that this could play a role in diversity of gas supplies in the future. In respect of this, the CER recently published a "Bridging Paper". The paper sets out the appropriate next steps prior to the injection of biomethane (which would be of the same specification as Natural Gas) into the natural gas grid.

4.1.2 Market Based Demand Side Measures

With an average of 45% of gas in Ireland being used for power generation in 2014, Ireland has relied on fuel switching as a demand-side measure for managing the gas system and protecting smaller, vulnerable and priority gas customers.

In 2009, the CER issued a Decision Paper – Secondary Fuel Obligations on Licensed Generation Capacity in the Republic of Ireland ([CER/09/001](#)). That paper specified 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 the first gas flows from the Corrib gas field. Given such developments, coupled with concerns regarding gas security of supply at a European level (due to a potential interruption of Russian gas supplies), the CER published a consultation paper in 2015 as to whether changes to the existing fuel stock obligations on electricity generators were merited – see [CER/15/213](#).

The CER also previously consulted on whether market based demand side measures could be introduced to address a gas shortage. In the interests of safeguarding the power system, EirGrid (Ireland’s electricity TSO) was strongly opposed to the introduction of market measures and contended that fuel switching should only be considered as an emergency response measure as there is an increase in the probability of electricity outages if fuel switching fails. They stressed that any fuel switching needs to be co-ordinated by the gas and electricity system operators. EirGrid has advised that “market-driven, uncoordinated change-over to secondary fuel would represent a significant and unnecessary risk to the supply of electricity to customers”.

Article 14 of Regulation 715 of 2009 requires that transmission system operators provide both firm and interruptible third-party access services. Consequently in 2012, the CER 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.

4.2 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 CER may declare a level 3 (emergency) crisis level. At this stage the NGEM will invoke GNI’s NGEPP which in the first instance provides for some non-market based measures. Specifically, this will involve the following steps:

1. Maximisation of the use of linepack on the network.
2. An instruction to gas production facilities and storage to maximise indigenous gas supplies.
3. If the system cannot be rebalanced as a result of these steps firm load shedding will commence.

4. GNI will initiate load shedding on behalf of the NGEM by issuing the following emergency instructions:
 - **Instruction** to Isle of Man and Northern Ireland requiring reductions in their overall take.
 - **Instruction** to EirGrid to co-ordinate reductions in gas off-takes for the power generation sector.
 - **Instruction** to Power station shippers, to re-nominate gas off-takes based on requirements as co-ordinated by EirGrid.
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 at this emergency stage are set out in GNI's NGEP.

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 45% 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. 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.

In order to ramp down in a controlled manner and maintain control, EirGrid stress that only two plants could be ramped down in parallel and these plants would have to be ramped down over the course of five hours. Power demand model analysis by GNI suggests that on a peak day there would be approximately 11

gas plants in merit. When considering the operational limitations of ramping down, as raised by EirGrid, 30 hours would be required to switch these 11 plants to their secondary fuel. According to GNI's calculations, this ramping down would require gas consumption equivalent to 60% of the peak day consumption level for the power generation sector.

Daily metered customers could also provide demand side response to a potential emergency. Other non-market based measures outlined in Table 4.2 including increased production and storage withdrawal are provided for in Ireland's National Emergency Plan. With reference to production, Corrib can meet approximately 28% of Ireland's peak day gas demand in 2018/19.

It should be noted also that the second interconnector from Moffat (IC2) was built for security of supply reasons. It provides 100% back up capacity and is being underwritten by the Irish customer. It has always been assumed that 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, assuming all power stations could be fuel switched in 5 hours. This does not allow for any supply to Northern Ireland through the SNP, which is connected to IC2. However, the 2016 UK Ireland Joint Risk Assessment considered the impact of Northern Ireland having access to linepack on IC2. The adoption of this regional approach between the UK and Ireland enables Ireland to meet the N-1 Standard, as required by the Regulation,, while providing access to linepack on the IC2 to NI.

5 Procedures & Measures in the event of a Crisis

This section presents high level procedures and measures applicable to each crisis level, and outlines predefined actions regarding commercial arrangements to make gas available in the event of an emergency. While this section endeavours to provide an accurate description of the procedures to be followed during a crisis, the CER, 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 10(6) of the Regulation.

5.1 Early Warning Procedure¹⁰

- Stage 1: The CER declares an early warning, based on the scenarios outlined in Section 2.1 of this document.
- Stage 2: The CER informs the Crisis Manager who in turn instructs GNI to issue an early warning to NGUs. The CER also informs DCCAE who may place the National Co-ordination Group on standby or decide to convene a meeting of the National Co-ordination Group (NCG).
- Stage 3: The Crisis Manager submits a Situation Report to the CER.
- Stage 4: The CER will inform the European Commission via the Gas Co-ordination Group
- Stage 5: The CER reviews the Situation Report, and decides whether to remove, maintain or escalate the early warning crisis level.
 - a. Remove: The early warning is revoked, and the Crisis Manager informs the GNI who in turn informs the NGUs. The Crisis Manager prepares a Closing Report for the CER.

¹⁰ Appendix 2 provides a flow chart of the early warning procedure.

- b. Maintain: The Crisis Manager provides regular updates to the CER. Following a review of update(s), the CER will issue a decision as to whether to remove (refer to point a) or escalate crisis level (refer to point c).
- c. Escalate: The CER declares an alert or emergency.

5.2 Alert Procedure¹¹

- Stage 1: The CER declares an alert, based on the scenarios outlined in Section 2.2 of this document.
- Stage 2: The CER informs the Crisis Manager who in turn informs GNI who issues an alert to NGUs. The CER also informs DCCAE who may place the National Co-ordination Group on standby or decide to convene a meeting of the National Co-ordination Group (NCG).
- Stage 3: The Crisis Manager submits a Situation Report and Action Plan to the CER.
- Stage 4: The CER reviews the Situation Report and Action Plan.
- Stage 5: The CER will inform the European Commission via the European Gas Co-ordination Group
- Stage 6: The Crisis Manager monitors market based measures effect on gas supplies, and provides update to CER.
- Stage 7: CER decides whether to remove, maintain or escalate the alert crisis level.
 - a. Remove: The CER informs the Crisis Manager that the alert is revoked. The Crisis Manager informs GNI who in turn informs the NGUs accordingly. Additionally, the Crisis Manager prepares a Closing Report for the CER.

¹¹ Appendix 3 provides a flow chart of the alert warning procedure.

- b. Maintain: The Crisis Manager provides regular updates to the CER. Following a review of update(s), the CER will issue a decision as to whether to remove (refer to point a) or escalate crisis level (refer to point c).
- c. Escalate: The CER declares an emergency.

5.3 Emergency Procedure¹²

- Stage 1: The CER declares an emergency, based on the scenarios outlined in Section 2.3 of this document.
- Stage 2: The CER informs the NGEM who convenes the GERT.
- Stage 3: The CER informs the Crisis Manager who in turn informs GNI and GNI informs the NGUs.
- Stage 4: The CER notifies the European Commission via the European Gas Co-ordination Group.
- Stage 5: The NGEM, in conjunction with GERT members, submits a Situation Report and Action Plan to the CER. CER approves Action Plan (if appropriate).
- Stage 6: The NGEM puts the NGEP into effect.
- Stage 7: The Crisis Manager liaises between the NGEM, GNI, DCCAE, and the CER and provides situation reports to the GERT.
- Stage 8: CER decides whether to remove or maintain the emergency crisis level.
 - a. Remove: The alert is removed, and the CER informs the Crisis Manager, EU Commission (via the European Gas Co-ordination Group). The Crisis Manager informs GNI who in turn informs the

¹² Appendix 4 provides a flow chart of the emergency procedure.

NGUs accordingly. Additionally, the Crisis Manager, in consultation with the NGEM and other relevant parties prepares a Closing Report for the CER.

- b. Maintain: The Crisis Manager, in consultation with the NGEM, provides regular updates to the CER. Following a review of update(s) and discussions with the GERT, the CER will issue a decision as to whether to remove (refer to point a) or maintain crisis level.

5.4 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.

6 Regional Co-operation

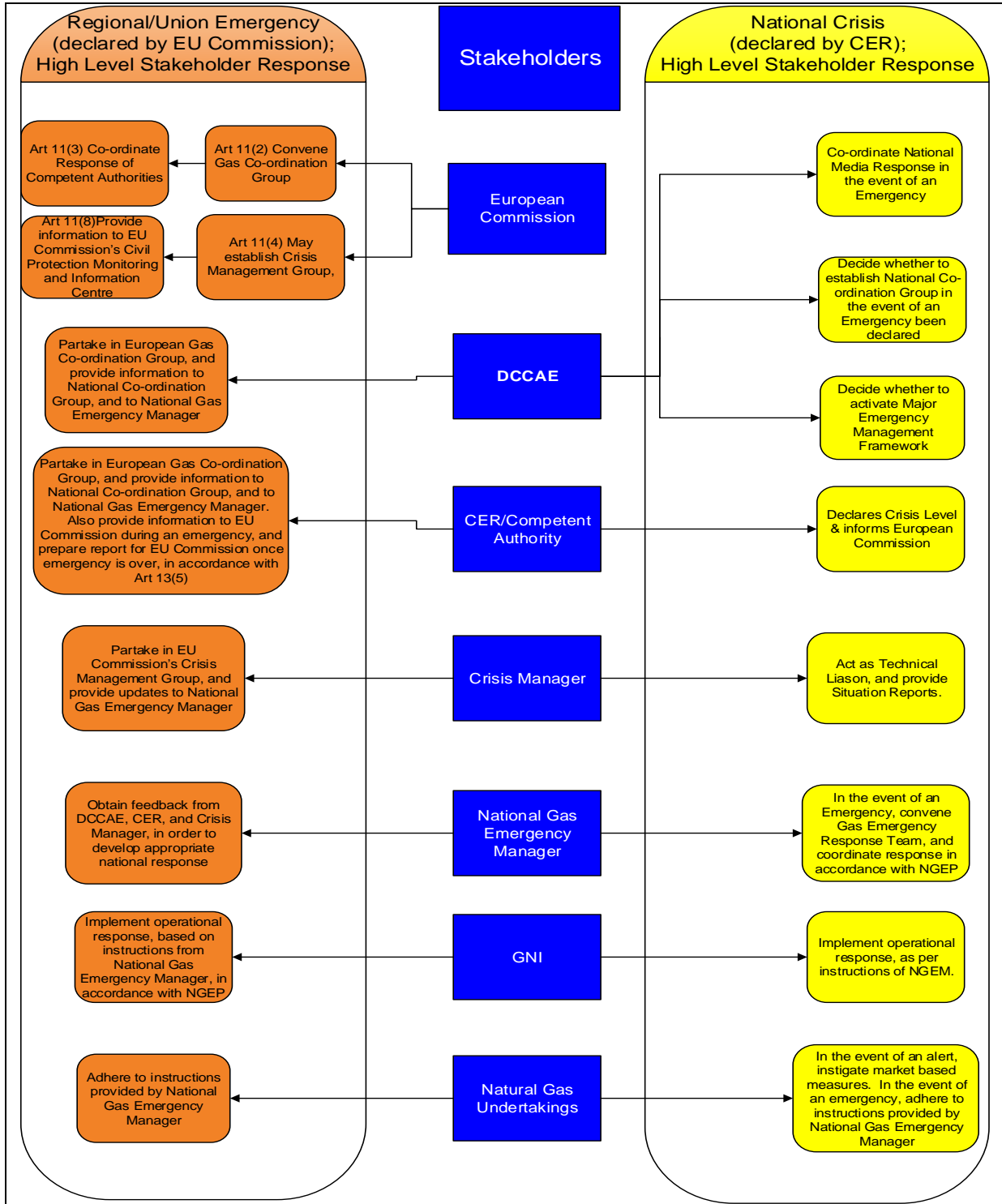
The primary vehicle for regional co-operation on the Emergency Plan is through the UK and Ireland Gas Emergency Group. This group comprises representatives from governments, regulators and TSOs of GB, Ireland and Northern Ireland. The group meets every six months and has developed a regional approach to emergency planning to ensure that the gas emergency operational plans of all jurisdictions work together. 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 a stage 3 crisis level (i.e. emergency). 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.

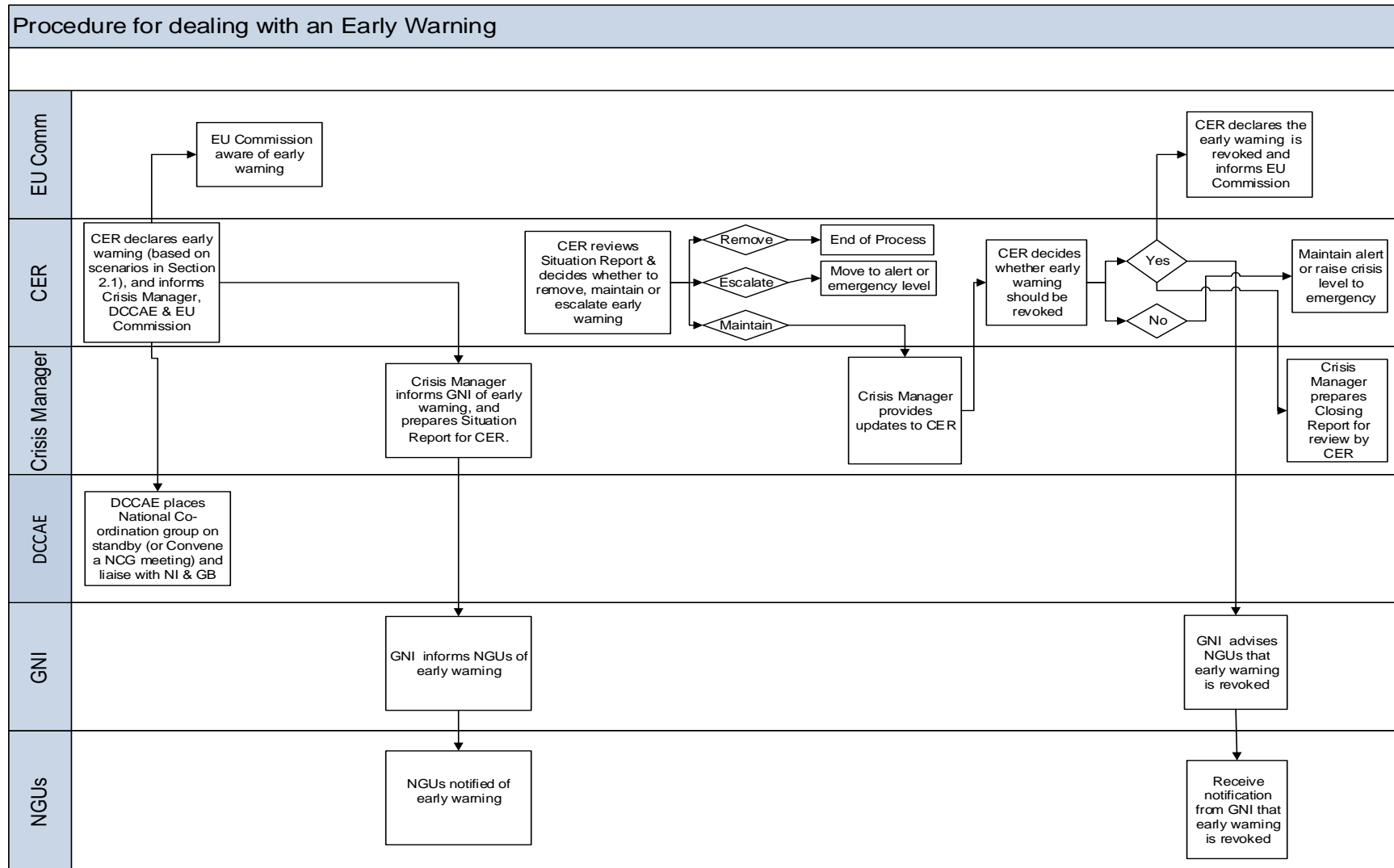
7 Conclusion

Ireland's Emergency Plan (2016-18) has been prepared in accordance with the Regulation. Given that the Emergency Plan will be required to be updated on a biennial basis, the CER will continue to monitor market developments, and update the document to ensure consistency with the Regulation.

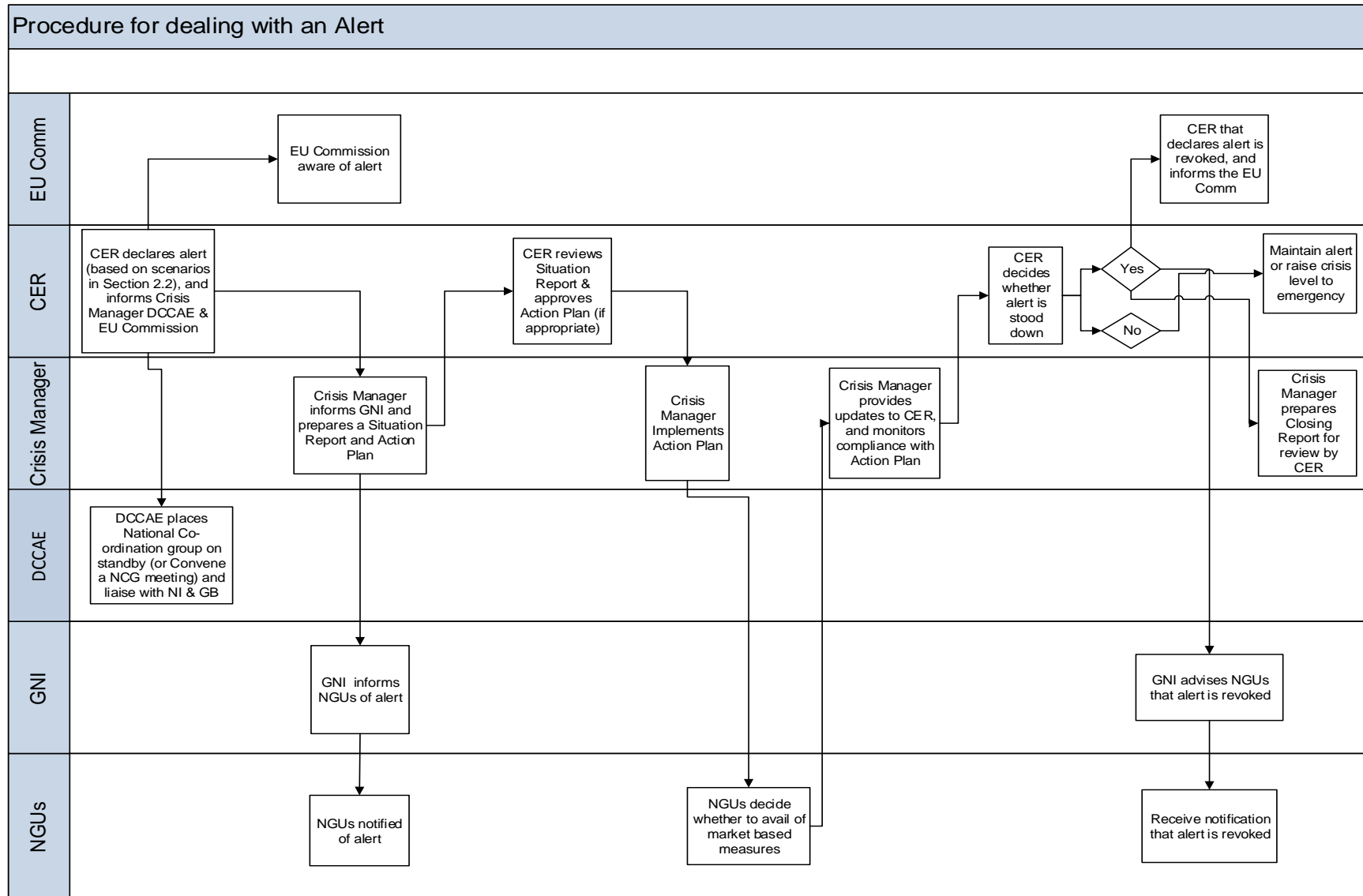
Appendix 1: High Level Overview of Roles & Responsibilities



Appendix 2: Early Warning Flow Chart



Appendix 3: Alert Flow Chart



Appendix 4: Emergency Flow Chart

