

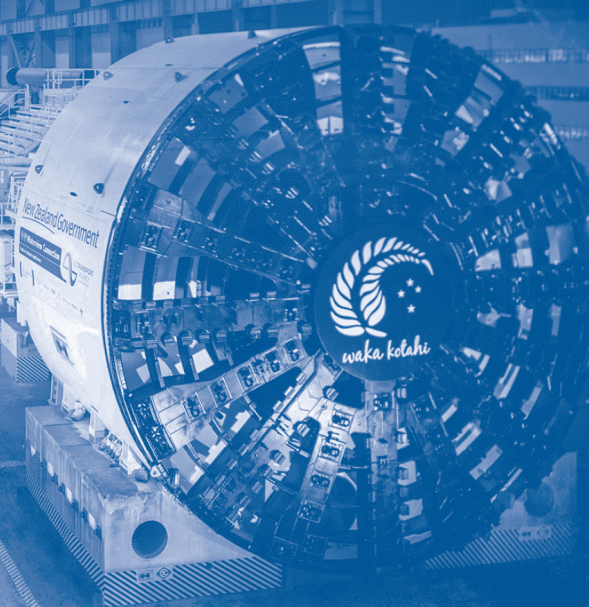
# Lifeline Utilities and CDEM

Director's Guideline for Lifeline Utilities and Civil  
Defence Emergency Management Groups [DGL 16/14]



Resilient New Zealand  
Aotearoa Manahau

New Zealand Government



## Lifeline Utilities and CDEM

Director's Guideline for Lifeline Utilities and Civil Defence Emergency Management Groups [DGL 16/14]

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### Authority

This guideline has been issued by the Director of the Ministry of Civil Defence & Emergency Management pursuant to s9(3) of the Civil Defence Emergency Management (CDEM) Act 2002. It supports lifeline utilities in their collaborative partnership with CDEM Groups, and in meeting their responsibilities under the CDEM Act 2002.

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## Foreword

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Services provided by lifeline utility organisations underpin the quality of life enjoyed by New Zealanders. There is increasing public awareness that emergencies have the potential to disrupt services; lifeline utilities and CDEM organisations share a strong customer-service motivation to minimise any disruption.

The Civil Defence Emergency Management Act 2002 (CDEM Act 2002) requires lifeline utilities to plan for and manage an emergency's impact on their networks. Lifeline utilities have been responsive to these requirements. This guideline aims to further support lifeline utilities in meeting their obligations under the CDEM Act 2002 by outlining how planning and coordination strengthen the performance of both lifeline utility and CDEM organisations.

Much has been made of risk management examples from the Canterbury earthquake sequence of 2010-2011. The foresight demonstrated by the investment in electricity lines network strengthening is often cited, but we must also appreciate the value of planning for emergencies. The Canterbury sequence provide many examples of how sound planning, leadership, and organisational culture assisted lifeline utilities in the response.

We have an opportunity to provide greater alignment of business risk management and CDEM planning. This guideline emphasises the value of this alignment in the lifeline utilities sector. Where alignment does not already exist, it might begin by building relationships through the Lifelines Groups. The experience, advice, and leadership of those lifeline utilities with established CDEM partnerships and processes are crucial to assisting other lifeline utilities and CDEM Groups.

I look forward to continuing to build on the trust and goodwill that exists between lifeline utilities, CDEM organisations, and the Ministry. By working together we will contribute to a prosperous and more resilient New Zealand.



John Hamilton

Director of Civil Defence Emergency Management





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# SECTION 1 INTRODUCTION

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The National Civil Defence Emergency Management Strategy supports the Civil Defence Emergency Management Act 2002 (CDEM Act 2002), and outlines a vision of a resilient New Zealand. This guideline describes how lifeline utilities may meet their obligations under the CDEM Act 2002 and the National CDEM Strategy.

A resilient lifeline utility is well placed to minimise the consequences of an emergency, and to benefit from any opportunities that adversity may present in their operating environment. Resilience is a constantly evolving state based on the performance characteristics of a lifeline utility's assets, personnel, and business functions. From the perspective of CDEM organisations, lifeline utility resilience contributes strongly to community resilience.

Maintaining robust arrangements relies on sound asset management processes informed by sustained risk management and business continuity management.

## 1.1 Overview for Chief Executives

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Lifeline utilities play a significant role during the response and recovery to an emergency and can be directly involved in minimising the consequences.

A coordinated approach to restore services is essential to mitigate the consequences of an emergency on the community and can be achieved through strong relationships within and across sectors.

Obligations to shareholders and customers to plan for, and ensure, continuity of service are reinforced by the CDEM Act 2002. Lifeline utilities are required to be capable of managing the consequences of an emergency.

The CDEM Act 2002 and this guideline do not impose new business requirements or alter responsibility for risk, asset and emergency management. The emphasis is on ensuring lifeline utilities provide continuity of operation, particularly where their service supports essential response and recovery activities. This can only be achieved by cooperative planning between utilities, local government and emergency services to ensure that plans are effective, thereby minimising loss and hastening a return to business.

Contributing to and being involved in CDEM Planning and Lifelines Groups helps to combine resources of multiple agencies in a collaborative effort to build New Zealand's resilience whilst at the same time supporting the continuity of your business.

As the chief executive of a lifeline utility, it is your responsibility to ensure your organisation can function to the fullest possible extent during and after an emergency. This guideline is provided to assist you in meeting your responsibilities.

## 1.2 About this guideline

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The responsibilities described in this document are based on best practice that will help ensure the legislative requirements are met.

The intended audience of this guideline are relevant personnel including those at the strategy and governance level and members of:

- lifeline utilities, sector coordinating entities and Lifelines Groups, and
- CDEM organisations, including any part of a CDEM Group or local authority that has responsibilities in CDEM.

This document can be read in conjunction with the Lifeline Utilities Coordinator Manual (available on the MCDEM website [www.civildefence.govt.nz](http://www.civildefence.govt.nz) on the publications page) which provides detailed information on the role and responsibilities of Lifeline Utilities Coordinators.

### Structure

This guideline has the following sections:

- Section 2 Lifeline utility responsibilities – describes the lifeline utilities' responsibilities before and during emergencies
- Section 3 Lifeline utility/CDEM partnership – describes the various partnerships and how they support lifeline utilities in meeting their CDEM obligations
- Section 4 Lifeline utilities coordination – describes aspects of lifeline utilities response coordination
- Section 5 Appendices – includes information about CDEM, the CDEM Act 2002, tasks and responsibilities, and sectors.

### Use of icons

The following icons are used in this guideline:



indicates a template is provided in the appendices.



indicates more information is available in another document or website.

## 1.3 Lifeline utilities and the CDEM statutory framework

The purpose of this guideline is to support lifeline utilities to meet their civil defence emergency management (CDEM) legislative requirements, particularly those under the CDEM Act 2002:

### GENERAL DUTIES OF GOVERNMENT DEPARTMENTS AND OTHERS

#### 59 Departments and others to undertake civil defence emergency management functions and responsibilities

Every department, Civil Defence Emergency Management Group, local authority, emergency service, and lifeline utility, and any other person required by this Act or any regulations made under this Act, or any civil defence emergency management plan, to undertake civil defence emergency management or to perform any functions or duties, must take all necessary steps to undertake civil defence emergency management or to perform those functions.

#### 60 Duties of lifeline utilities

Every lifeline utility must –

- (a) ensure that it is able to function to the fullest possible extent, even though this may be at a reduced level, during and after an emergency:
- (b) make available to the Director [of CDEM] in writing, on request, its plan for functioning during and after an emergency:
- (c) participate in the development of the national civil defence emergency management strategy and civil defence emergency management plans:
- (d) provide, free of charge, any technical advice to any Civil Defence Emergency Management Group or the Director [of CDEM] that may be reasonably required by that Group or Director:
- (e) ensure that any information that is disclosed to the lifeline utilities is used by the lifeline utility, or disclosed to another person, only for the purposes of this Act.



Further information on the requirements of lifeline utilities can be found in the National Civil Defence Emergency Management Plan, available at [www.civildefence.govt.nz](http://www.civildefence.govt.nz) by searching the document name.

## 1.4 Key terms

This section provides clarifications of key terms used in this document.

### CDEM

See Appendix A About CDEM on page 28 for a brief overview of CDEM, including a glossary of commonly used CDEM terms.

In this guideline 'civil defence emergency management' has the same meaning as in the CDEM Act 2002:

#### 4 Interpretation...

##### ...civil defence emergency management—

- (a) means the application of knowledge, measures, and practices that—
  - (i) are necessary or desirable for the safety of the public or property; and
  - (ii) are designed to guard against, prevent, reduce, or overcome any hazard or harm or loss that may be associated with any emergency; and
- (b) includes, without limitation, the planning, organisation, co-ordination, and implementation of those measures, knowledge, and practices.



A full description of CDEM is provided in the Guide to the National Civil Defence Emergency Management Plan, available at [www.civildefence.govt.nz](http://www.civildefence.govt.nz) by searching the document name.

### Lifeline utilities

A lifeline utility is an organisation that provides an essential service and is defined in Schedule 1 of the CDEM Act (see Appendix B on page 33). Lifeline utilities include telecommunications, water, wastewater, ports, airports, roads, rail, electricity, gas, petroleum, and broadcast media organisations.

### Emergency

In this guideline 'emergency' has the same meaning as in the CDEM Act 2002:

#### 4 Interpretation...

##### ...emergency means a situation that—

- (a) is the result of any happening, whether natural or otherwise, including, without limitation, any explosion, earthquake, eruption, tsunami, land movement, flood, storm, tornado, cyclone, serious fire, leakage or spillage of any dangerous gas or substance, technological failure, infestation, plague, epidemic, failure of or disruption to an emergency service or a lifeline utility, or actual or imminent attack or warlike act; and
- (b) causes or may cause loss of life or injury or illness or distress or in any way endangers the safety of the public or property in New Zealand or any part of New Zealand; and
- (c) cannot be dealt with by emergency services, or otherwise requires a significant and co-ordinated response under this Act.

## Lifeline utilities and the 4Rs

The National Civil Defence Emergency Management Plan describes the 4Rs of emergency management as being risk reduction, readiness, response, and recovery. Their definitions are given in Appendix A About CDEM on page 28.

Lifeline utilities' responsibilities during risk reduction include reducing the magnitude of the impact of any emergency, as well as minimising the likelihood of the lifeline utility being the cause of an emergency. This includes hazard risk management being undertaken when locating new assets.

Preparation for emergencies is carried out during readiness, and for lifeline utilities this is part of business as usual tasks such as business continuity planning and exercising.

Emergency response and recovery for lifeline utilities is when they are responsible for activating the relevant business continuity and emergency plans in response to an emergency, and returning to business as usual.

## Emergency Plan

Emergency plans for lifeline utilities are comprehensive plans for the safety of staff and security of your business immediately after an emergency. They should include comprehensive guidelines on evacuating premises, assembly areas, shutting off services if necessary and assisting injured colleagues and customers.

## Business Continuity Plan

This is a detailed plan or checklist of things that need to be done to return to business as usual and solve any potential issues. For lifeline utilities, this should also include detailed descriptions of how to ensure continuity of service to customers.

## CDEM facilities and personnel

Different terms are used by CDEM Groups for the places where CDEM functions are carried out. For consistency, in this guideline:

- Before an emergency, the:
  - GEMO (Group Emergency Management Office) is the regional office where CDEM functions are carried out on behalf of the CDEM Group before an emergency occurs. It is managed by the GEMO Manager.
  - EMO (Emergency Management Office) is the office(s) where CDEM functions are carried out at a local level before an emergency occurs. The person who carries out the CDEM functions is the EM Officer.
- During and following an emergency, the:
  - NCMC (National Crisis Management Centre) is a facility that operates at a national level to coordinate and support one or more activated ECCs
  - ECC (Emergency Coordination Centre) is a facility that operates at a regional level to coordinate and support one or more activated EOCs
  - EOC (Emergency Operations Centre) is a facility that operates at a local level to manage the response, and
  - CDC (Civil Defence Centre) is a facility in a community that is set up during an emergency to support individuals, families/whānau, and the community. The CDC is open to members of the public, and may be used for any purpose including public information, evacuation, welfare, or recovery depending on the needs of the community. CDCs may be operated by CDEM trained volunteers, members of the community, and/or CDEM organisations.

**CDEM critical activities**

CDEM-critical activities are defined through regional CDEM Group Plans and the National CDEM Plan, and align with priorities set by Government for allocation of resources during emergency response.

**Sector**

In this guideline 'sector' refers to sectors of lifeline utilities, such as electricity and telecommunications. See Appendix D Lifeline utility sectors on page 37 for more information, or the Lifeline Utilities Coordinator Manual (available on the MCDEM website [www.civildefence.govt.nz](http://www.civildefence.govt.nz) on the publications page) for detailed information.

**Sector organisations**

Sector organisations represent or support lifeline utilities within one sector, and include sector coordinating entities (SCEs). More information on Sector coordinating entities is given on page 19.

**Cluster**

A cluster is a group of agencies (government agencies, non-government organisations, or lifeline utilities) that interact to achieve common CDEM outcomes (see the Guide to the National CDEM Plan for more information on clusters).

**Lifeline Utilities Coordinator**

The Lifeline Utilities Coordinator (LUC) is a non-statutory position based in a CDEM Group EOC/ECC and/or the National Crisis Management Centre (NCCMC), and is responsible for liaising with lifeline utilities on behalf of the Controller during emergency response. The LUC may be asked to work on behalf of the Recovery Manager during recovery.

See Section 4 Lifeline utilities coordination on page 23 for more information about the LUC and their responsibilities.

**Lifeline Liaison**

A Lifeline Liaison is a person within a lifeline utility who provides the point of contact for CDEM personnel. During response, Lifeline Liaisons coordinate with the LUC when that role is activated, or if there is no LUC, to the Operations Manager (see CIMS on page 32 for more information on Operations).

**Lifeline Utilities Officer**

Lifeline Utilities Officers are any CDEM Group EOC/ECC and/or NCCMC personnel assigned to the Lifeline Utility Coordination team.

**National lifeline utilities**

National lifeline utilities are those that have operational coverage in more than one region, or that affect operational coverage in more than one region.

## Risk management and business continuity terms

References to risk management and business continuity processes in this guideline are based on the following terms and definitions.

Risk management describes the processes used by organisations to:

- determine the risks to their business
- reduce the risks identified, and
- establish plans to respond to and recover from the risks that cannot be reduced.

Under risk management, the focus is on identifying and managing risks that are more likely to occur and where the consequences appear to be greatest. Risks arising from emergencies (as defined by the CDEM Act 2002) are commonly addressed through these processes.

Business continuity management refers to the processes that identify:

- functions essential for the organisation to continue operating (e.g. access to data/records)
- how those functions might be adversely affected, and
- how functions can continue despite the adverse effect.

Business continuity plans, an output of business continuity management, usually identify required levels of operation (service levels) to be met outside normal operating conditions (see section 2.1.2 Business continuity management on page 12).

Business continuity management differs from risk management by placing less emphasis on causes of disruption and more on how relevant consequences might be managed.

## SECTION 2 LIFELINE UTILITY RESPONSIBILITIES

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This section includes a summary of lifeline utilities' responsibilities under the CDEM Act 2002, and describes ways for lifeline utilities to meet these requirements, under the headings:

- Responsibilities during risk reduction and readiness (on page 8)
- Responsibilities during response and recovery (on page 15).

This section focuses on responsibilities that are specific to lifeline utilities; Section 3 Lifeline utility/CDEM partnership on page 17 focuses on partnerships and related processes that support lifeline utilities in meeting their CDEM responsibilities.

Also, a summary of responsibilities that relate to lifeline utilities, for both lifeline utilities and their partners in CDEM, is given in Appendix C Summary of tasks and responsibilities on page 35.

### Statutory framework

The New Zealand CDEM statutory framework consists of:

- Civil Defence Emergency Management Act 2002 (the CDEM Act 2002)
- National Civil Defence Emergency Management Plan (the National CDEM Plan)
- Guide to the National Civil Defence Emergency Management Plan (the Guide), and
- National Civil Defence Emergency Management Strategy.

Lifeline utilities are required by the CDEM Act 2002 to ensure they take 'all necessary steps to undertake civil defence emergency management' (section 59), and are able to 'function to the fullest possible extent, even though this may be at a reduced level, during and after an emergency' (section 60).

Lifeline utilities also have specific responsibilities under other elements of the CDEM statutory framework, including responsibilities as agencies and clusters (lifeline utilities are included in the definitions of agencies and clusters in the Guide).

### 2.1 Responsibilities during risk reduction and readiness

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The main steps in achieving the risk reduction and readiness requirements of the CDEM statutory framework are ensuring that risk management processes include consideration of local hazards and risks; and that business continuity planning is undertaken to ensure a rapid restoration of services following any disruption.

Underpinning these activities is the need to have effective working relationships between lifeline utilities and CDEM organisations.

In summary, the responsibilities for lifeline utilities include:

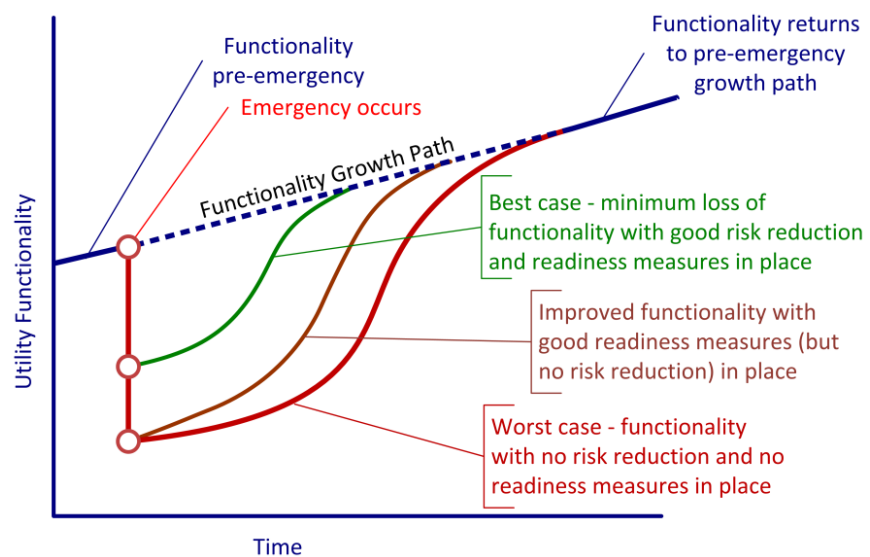
- ensuring the ability to function to the fullest possible extent, even though this may be at a reduced level, during and after an emergency
- developing, maintaining, and exercising coordination processes for responses to emergencies
- providing advice to CDEM Groups and MCDEM
- participating in CDEM Planning

## Recommended ways for lifeline utilities to discharge those responsibilities include:

- participating in Lifelines Group activities
- carrying out business continuity management, including preparing for own incident responses, and
- participating in regional and national exercises.

### Outcomes

The risk reduction and readiness activities described in this section are an effective means of increasing the threshold for the “fullest possible extent”. It is also a means of ensuring that the period of time operations run at a reduced level is decreased, as shown in Figure 1:



**Figure 1 Relationship between risk reduction and readiness; and the recovery pathway**  
*Based on a graphic by Professor S Chang, University of British Columbia.*

### Service levels

The CDEM Act 2002 requires lifeline utilities to ensure that they are able to function to the ‘fullest possible extent’ during and after an emergency.

A critical part of business continuity management is deciding what service levels to aim for during a business interruption and how they will be achieved. Lifeline utilities need to consider both service delivery expectations and service delivery capacity for a range of disruptions. Each lifeline utility needs to:

- determine their obligations by considering commercial needs, legislative requirements, interdependencies with other lifeline utilities, and social responsibilities
- gather information on ways these obligations may be met by:
  - analysing national and international learnings from previous events, and current best practice
  - consulting with key suppliers and users, including through the relevant Lifelines Group(s), and
- determine the optimal level of service that meets their obligations, and plan for delivery of this level of service.

Planning to ensure the optimal level of service is delivered is a critical aspect of both risk management and business continuity management.

## Key reference documents



Risk management and business continuity management include a range of tools that can enable lifeline utilities to plan for desired service levels. The following reference documents include some of those tools:

- AS/NZS ISO 31000:2009 Risk Management – Principles and guidelines.
- AS/NZS 5050:2010 Business continuity – Managing disruption-related risk
- ISO 22313:2012 Societal security – Business continuity management systems – guidance
- Business Continuity Institute’s Good Practice Guidelines, available on their website [www.thebci.org](http://www.thebci.org).

## Readiness for lifeline utilities



Use Appendix E Lifeline utility CDEM readiness checklist on page 43 to ensure the readiness tasks are carried out.

The lifeline utility needs to amend the checklist to reflect the specific tasks required of them. The modified checklist is then used to record their progress in preparing for an emergency.

## Management buy-in and value

The ability to achieve service levels in adverse conditions creates and protects value by improving performance. This only occurs when senior lifeline utility staff at the strategy and governance level commit to effective risk management and business continuity management. This commitment supports the risk management and business continuity management framework, the resulting implementation, and its ongoing monitoring and review.

## Collaboration

Lifeline utilities that collaborate to identify risks and interdependencies will have a much more comprehensive view of the issues they need to manage. Collaboration involves sharing relevant information such as:

- hazard analysis and operational consequences (e.g. arising from information on network locations and hazard overlays)
- demand/restoration hierarchy, including how services are needed to sustain CDEM-critical activity and other lifeline utilities, and
- emergency response and recovery coordination arrangements.

When working with other organisations, the focus is on sharing information and gaining understanding of respective arrangements. It does not necessarily require the transfer of organisation-specific plans or documentation.

Collaboration with other lifeline utilities and with CDEM organisations is an essential part of risk management, allowing sharing of ideas and risk reduction initiatives. Lifelines Groups offer a regional forum for collaborative risk management.

## 2.1.1 Risk management

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Detailed guidance on risk management processes is available in AS/NZS ISO 31000:2009 Risk Management – Principles and guidelines. This standard defines the risk management process as “the systematic application of management policies, procedures and practices to the tasks of communicating, establishing the context, identifying, analysing, evaluating, treating, monitoring and reviewing risk”.

For CDEM organisations, risk means “the likelihood and consequences of a hazard”. This document adopts the interpretation that in managing risk, lifeline utilities must adopt a broad approach to “hazard” (referred to as “all hazards” in CDEM), but the CDEM risk definition is generally appropriate.

Risk management is a key influence on how assets are managed, and is an essential decision-making tool when considering investment in new assets or new businesses processes.

### Risk management process

AS/NZS ISO 31000 describes risk management as having five steps:

1. Establishing the context - scoping the organisational basis for risk management, including establishing stakeholder expectations, and setting parameters for risk identification, assessment, and management.
2. Risk identification - identifying the organisation’s opportunities and threats.
3. Risk analysis - identifying the impact of opportunities and threats on the organisation.
4. Risk evaluation - determining which risks to treat (through risk reduction measures), and their priorities. This step will result in a number of residual risks for which there is no (or only partial) treatment.
5. Risk treatment - determining what actions will be taken to treat (reduce) risk, and manage residual risk.

Continuously running alongside the risk management steps are:

- monitoring and reviewing - determining whether analysis, planning, and actions are effective, and
- communication and consultation - for lifeline utilities this includes engagement with CDEM organisations, and other lifeline utilities.

### Risk assessment

Risk assessment is a critical process within risk management, and comprises risk identification, risk analysis, and risk evaluation. Risk assessment is a core process for lifeline utilities in determining how their assets are managed. It is also a core function for CDEM organisations developing risk reduction and readiness initiatives with their wider communities.

When assessing risks, lifeline utilities need to consider regional and national hazards and their potential impacts. CDEM organisations are valuable sources of this information.

## Risk treatment

Treatment of risk is a critical component of risk management and is based on risk assessment results. Risk treatment options include:

- treating the risk through a risk reduction (mitigation) measure such as physically strengthening assets, or changing business processes
- eliminating the risk by stopping the activity or function that leads to the risk
- transferring the risk, for example through insurance or hedging
- accepting that it is not practicable to treat the risk and managing it through business continuity planning

Ongoing risk management frequently identifies risk treatment that must be incorporated into business as usual processes. Each lifeline utilities' risk management framework should outline how risk is integrated into regular activities.

## 2.1.2 Business continuity management

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For the purposes of this guideline business continuity management means “preparing an organization to deal with disruptive incidents that might otherwise prevent it from achieving its objectives” (from ISO 22313:2012 Societal security – Business continuity management systems – guidance).

### Five components of business continuity management

ISO 22313:2012 outlines five components of business continuity management:

- identification of the organisations key services (or products)
- identification of the prioritised activities/resources that deliver them
- evaluation of the threats to these activities/resources, and their dependencies
- establishing arrangements to resume these activities following an incident, and
- ensuring that these arrangements will be effective in a wide range of circumstances.

### Business continuity plans

Lifeline utilities' business continuity plans need to include:

- comprehensive analysis of potential impact on operations, including those arising from failure of interdependent lifeline utilities or outsourcing arrangements
- a hierarchy of supply (including CDEM-critical activities), and disconnection and restoration priorities, determined in consultation with CDEM Groups, and
- the organisation's plan to restore any disrupted services.

Effective business continuity planning also needs to ensure that:

- the lifeline utility has the capability and capacity (personnel, equipment, and contracting arrangements) required to respond effectively to disruption to business
- consequences of emergencies are understood along with responsibilities and roles within and across sectors, and
- plans are validated and exercised with external agencies.

National lifeline utilities' plans need to cover national and regional disruptions to business.

### 2.1.3 Providing information and advice

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Section 60, clause b), c), and d) of the CDEM Act 2002 require lifeline utilities to provide information and advice.

If requested, lifeline utilities are expected to make their emergency and business continuity planning available to the Director of MCDEM. These plans are protected from wider disclosure (see Managing commercial information on page 18).

Also, where reasonably required by the Director or by a CDEM Group, free technical advice may be requested from a lifeline utility. This could include:

- reviewing the consequences of national or regional hazards on the lifeline utility
- clarifying responsibilities, roles, and coordination of activity
- assisting with the development of a CDEM Group Plan or national CDEM documents
- participating in the development of Lifelines Group projects or plans, or
- supporting CDEM operations during emergency response or recovery.

Specific examples of these such as participating in lifelines projects, and reviewing CDEM documents are covered in section 3.3 Partnership activities on page 21.

#### Lifeline Liaison

Lifeline Liaison are lifeline utility representatives that may be assigned to the NCMC, ECCs, or EOCs during response, and recovery centres during recovery. They share information and provide advice, usually via the Lifeline Utilities Coordinator. Lifeline Liaison need to be identified and trained during readiness.

### 2.1.4 Capability development

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Training is an important part of ensuring that emergency plans will be effective when they are put into practice.

#### Understanding local CDEM organisations

Personnel who need to familiarise themselves with information about the local CDEM organisations include:

- any lifeline utility personnel who may work with CDEM Group personnel before or during an emergency
- Lifeline Liaisons
- members of Lifelines Groups, and
- members of sector coordinating entities.

These personnel need to know the local, regional, and national CDEM structure and CDEM personnel relevant to their role, for business as usual and during response to an emergency.

## Exercises

Exercises can be an effective way to scope, test, and improve planning. Consider carrying out internally led exercises, and participating in externally led exercises. Regional CDEM planning activities often provide a good opportunity to test plans.

The MCDEM publication Writing operational exercises for emergency management is available on the publications page of the MCDEM website [www.civildefence.govt.nz](http://www.civildefence.govt.nz).



Whenever exercises are carried out, the organiser and participants need to analyse exercise outcomes, and develop and implement corrective action plans to address any deficiencies.

## Attending CDEM exercises

Information on local and national exercises is available from the EM Officer or GEMO Manager.



Information about national level capability development is also available from the Capability team at MCDEM head office, which can be contacted through the website [www.civildefence.govt.nz](http://www.civildefence.govt.nz). This includes MCDEM-led training for Lifeline Utilities Coordinator, and for people writing operational exercises.

## Regional workshops

Some GEMOs conduct CDEM related workshops in their area. They often invite personnel from other organisations that they will work with during an emergency. The workshops may be a general sharing of processes, information and ideas, or cover specific topics, such as the use of hazard reporting.

## 2.2 Responsibilities during response and recovery

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Many of the tasks that will be carried out by lifeline utilities during response and recovery are determined by their specific incident management, emergency management, and/or business continuity plans, and therefore cannot be described in detail here. This section focuses on specific activities that are generic for all lifeline utilities, summarises tasks, and provides brief descriptions of tasks that have not been discussed under risk reduction and readiness.

### 'Response' vs 'recovery'

In this section response and recovery are combined, as these activities often occur at the same time. In addition, the terms are used differently in lifeline utility and CDEM organisations, mainly in the timescales used.

Lifeline utilities focus on recovery activities as soon as a disruption is detected (in addition to carrying out their business continuity plans and emergency plans to ensure their own personnel are safe). Their maximum tolerable period of disruption (MTPD) is often well within the timeframe of emergency response operations.

Response and recovery tasks (see About CDEM on page 28 for their definitions) both occur during and following an emergency. At the beginning of an emergency the initial focus is on response activities however recovery activities also begin during early response. Once most response-specific activities are completed, the response is deactivated, and the Controller transitions to a Recovery Manager.

### 2.2.1 Managing own response

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The most important response activity for lifeline utilities is initiating and managing their own response by following their incident management, emergency management, and/or business continuity plans. The focus is on attaining their predetermined service levels (see Service levels on page 9).

In carrying out their response plans, lifeline utilities need to engage with the relevant external parties. During an emergency, this includes lifeline CDEM organisations, and possibly with sector coordinating entities (SCE). These interactions are required under the CDEM Act 2002, and will most often be undertaken by a Lifeline Liaison.

### 2.2.2 Summary of response/recovery responsibilities

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#### *Initial tasks*

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The initial tasks for lifeline utilities during response are:

- activating emergency management, and/or business continuity plans
- deciding whether to activate the role of Lifelines Liaison
- carrying out impact assessment
- informing CDEM EOC/ECC/NCMC of:
  - operational status
  - implications for CDEM critical customers
  - service restoration projections, including areas affected
  - any resource requirements necessary to restore service that cannot be met by the lifeline utility.

## Activating the Lifeline Liaison

When a lifeline utility is significantly impacted by an emergency, they need to consider assigning a Lifeline Liaison to the CDEM ECC, or to the NCMC. A Lifeline Liaison may also be requested by the CDEM ECC or NCMC.

## Ongoing tasks

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The ongoing tasks for lifeline utilities during response and recovery are:

- managing their own response and recovery by following their emergency management, and/or business continuity plans
- keeping CDEM EOC/ECC/NCMC updated on:
  - operation status
  - implications for CDEM-critical customers
  - service restoration projections including affected areas
  - any resource requirements necessary to restore service that cannot be met by the lifeline utility
- remaining available to CDEM EOC/ECC/NCMC
- participating in sector coordination activities as appropriate, and
- coordinating their public messaging with the CDEM Public Information Management (PIM) team to ensure consistency.

## Sector coordination

Sector coordination will generally be required in large scale emergencies where multiple providers from one or more sectors are affected. This is often carried out by SCEs, especially during a national response. More information is available in Sector coordinating entities on page 19, and in section 4.2.2 Sector coordinating arrangements on page 25.

## Supporting requests for information

When lifeline utilities are requested to provide information to CDEM EOCs/ ECCs/ NCMC, or recovery offices, it will most likely be requests for status reports, impact assessments, and status of disruptions.

The lifeline utility should be informed of how they need to provide information (means and format), including templates and web addresses for uploading. ECC's and the NCMC often use a web-based emergency management information system (EMIS).

## National infrastructure recovery plans

For nationally significant emergencies, recovery plans are developed. The lead agency will consult with a range of organisations, including lifeline utilities.

Infrastructure recovery plans explicitly include infrastructure network planning that will need to be incorporated into lifeline utilities business as usual operations.

## Winding down tasks

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### Debriefing and review



Each lifeline utility needs to review relevant procedures following response and recovery, including carrying out post-activity debriefings. Outcomes are then implemented through the lifeline utility's business continuity and/or emergency management training and planning.

The MCDEM publication Organisational debriefing is available on the MCDEM website [www.civildefence.govt.nz](http://www.civildefence.govt.nz) by going to the 'publications' page.

# SECTION 3 LIFELINE UTILITY/CDEM PARTNERSHIP

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## 3.1 Working in partnership

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### Relationship management

The focus for CDEM offices and lifeline utilities is fostering relationships so that their understanding of each other's role is established and maintained. This understanding is essential for effective interaction between lifeline utilities and CDEM personnel throughout the 4Rs, and is particularly important in an emergency. Potential benefits include:

- exchanging and agreeing risk, asset, and emergency management priorities
- reviewing, improving, and developing integrated planning, and
- ensuring competent coordinated operational arrangements across ECCs/EOCs.

Actively fostering relationships improves mutual trust, respect and understanding, and has the following benefits:

- opportunities for joint planning can be utilised, improving the quality of plans, reducing the duplication of effort, and promoting understanding of interdependencies
- an easier flow of information when an emergency occurs, and
- key people can be identified and contact details can be exchanged in advance.

Lifeline utilities may interact with CDEM organisations independently, as part of a Lifelines Group or sector organisation, and through their national headquarters (if applicable).

Individual lifeline utilities are encouraged to work with other lifeline utility or CDEM organisations by:

- contributing to the region's CDEM Group Plan by putting in a submission during a review and/or providing advice or information requested by a CDEM organisation
- providing technical advice during the review of the National CDEM Plan, or National CDEM Strategy
- establishing operational links with local EOCs
- becoming active members of the region's Lifelines Group, and
- participating in national and/or regional sector groups.

Lifeline utilities can make contact with their region's CDEM Group by contacting the GEMO Manager of their CDEM Group, or the EM Officer at their local council.

### Summary of responsibilities

A summary of responsibilities that relate to lifeline utilities, for both lifeline utilities and their partners in CDEM, is given in Appendix C Summary of tasks and responsibilities on page 35.

### Lifeline Liaisons

Lifeline Liaison are representatives from the lifeline utility assigned to liaise with CDEM organisations during response and recovery. Fostering the relationship between Lifeline Liaisons, CDEM organisations, and SCEs is an important readiness activity, as is training the Lifelines Liaisons.

## Managing commercial information

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### Sensitive information

Partnership activities sometimes raise the need to protect commercially sensitive information. In most cases, information on the nature and number of customers, sufficient to support discussion of outage impact and interdependencies, can be revealed without compromising commercial imperatives.

MCDEM and CDEM Groups need to carefully consider the information required and ensure it is at a level that is appropriate. Information will only be requested to assist with the response to and recovery from an emergency.

Protection from wider information disclosure is available under section 60(e), and section 83 of the CDEM Act 2002. Lifeline utilities are required to restrict the use or further disclosure of information to the purposes of the CDEM Act 2002.

### Official information requests

Official information legislation (Official Information Act 1982 and Local Government Official Information and Meetings Act 1987) allows some information from lifeline utilities obtained by officials to be requested by the public.

Requests are rare and each request is required to be considered on its merits, but protection is available under sections 60 (e) and 83 of the CDEM Act 2002. Additional protection may be granted under the official information legislation if information released is likely to:

- unreasonably prejudice the commercial position of the supplier or the subject of the information, or
- prejudice the supply of similar information, or information from the same source, where continued supply is in the public interest.

## 3.2 Partners

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For a summary of the specific responsibilities for all partners see Appendix C Summary of tasks and responsibilities on page 35.

### CDEM organisations

A CDEM organisation is any part of a CDEM Group or local authority that has responsibilities in CDEM. CDEM Groups have GEMOs which undertake a range of CDEM functions across the 4Rs, and regional ECCs that function during and following emergencies.

CDEM organisations are strongly encouraged to develop one-to-one relationships with lifeline utilities, as well as participating in regional lifeline groups.

### Sector coordinating entities

A sector coordinating entity (SCE) is an organisation, group of sector representatives, or individuals agreed by a lifeline utility sector to provide an effective single point of contact to the NCMC (or sometimes to an ECC) and which will undertake a range of sector coordinating functions during an emergency.

Generally SCE readiness activities are limited to activities that establish emergency communication protocols within a sector, and are a means of involving agencies with a response role. Some SCEs undertake readiness activities beyond this, such as facilitating sector emergency exercises and contingency planning.

SCEs carry out the following functions during response and recovery:

- facilitate solutions to issues that are sector specific and do not require Government assistance/support
- coordinate and provide sector situational information to the NCMC
- participate in/contribute to NCMC planning activities as required
- participate in exercises
- distribute situational information from the NCMC (to their sector)
- coordinate requests for assistance with the NCMC or appropriate government body/lead agency
- coordinate with other affected sectors, particularly where dependencies exist, and
- perform other operational tasks as necessary
- participate in debriefs and reviews.

See section 4.2.2 Sector coordinating arrangements on page 25 for more information.

### Lifelines Groups

Lifelines Groups (sometimes known as Engineering Lifelines Groups, or Lifelines Advisory Groups) are regional voluntary groups with members that include lifeline utilities, scientists, emergency managers, and other professionals.

The main focus of Lifelines Groups is supporting lifeline utilities to minimise outages through:

- reducing the risk of damage (particularly to assets) from hazards, and
- readiness for response and recovery.

The emphasis is on individual lifeline utility organisational performance and collaboration between lifeline utilities to identify interdependencies.

Lifelines Group activities generally include:

- the core activity of carrying out lifelines projects (see Working on lifelines projects on page 22)
- encouraging and supporting lifeline utilities in identifying hazards, and the associated risks
- developing and promoting emergency preparedness, and
- carrying out risk reduction and readiness initiatives that involve more than one lifeline utility.

### New Zealand Lifelines Committee

The New Zealand Lifelines Committee (NZLC) functions are to:

- advise Lifelines Groups on best practice including encouraging new projects and providing a link to projects undertaken by other lifelines groups
- provide a link between Lifelines Groups and government
- promote research on infrastructure resilience, and
- organise the annual National Lifelines Forum.

The focus of the NZLC is:

‘Enhancing the connectivity of lifeline utility organisations across agency and sector boundaries in order to improve infrastructure resilience.’

The NZLC has adopted three themes on infrastructure resilience:

- robust assets, or satisfactory alternative service continuity arrangements
- effective coordination, before and after emergencies, at national, regional and local levels, and
- realistic end-user expectations, so that users are aware of the risks and able to consider options.



More information is available on the MCDEM website [www.civildefence.govt.nz](http://www.civildefence.govt.nz) by searching for ‘lifelines committee’.

## 3.3 Partnership activities

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The most important activity undertaken in the CDEM/lifeline utility partnership is the strengthening of relationships

- between individuals who hold relevant positions within their respective organisations, and
- between organisations who are dependent on each other's ability to undertake their responsibilities under the CDEM Act 2002.

The strength of relationships between CDEM organisations and lifeline utilities plays a significant role in determining the quality of outcome in a range of specific activities.

### 3.3.1 Lifeline utilities and CDEM planning

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#### National CDEM document review

Lifeline utilities may be requested to provide advice or offer submissions when national CDEM documents are reviewed, including the National CDEM Plan and the National CDEM Strategy.

Such advice and submissions may be made by individual utilities, through Lifelines Groups, or by sector organisations.

#### Contributing to CDEM Group Plans



CDEM Group Plans are required under section 48 of the CDEM Act 2002, and must include descriptions of the hazards and risks, and how they will be managed by the CDEM Group. CDEM Group Plans are available through local authorities' emergency management webpages, or can be located on the MCDEM website [www.civildefence.govt.nz](http://www.civildefence.govt.nz) by searching for 'CDEM Group Plans'.

Lifeline utilities may be requested to provide advice during the review of a CDEM Group Plan. Lifelines projects are often used as a source of information for reviews of CDEM Group Plans (see Working on lifelines projects on page 22).

Contributing to CDEM Group Plans is an opportunity to strengthen the CDEM/lifeline utility relationship, with the possible benefits of:

- increasing access to risk information
- facilitate more effective response and recovery operations, and
- improving the ability of lifeline utilities to function to the fullest possible extent during and following an emergency.

### 3.3.2 Working on lifelines projects

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Regional Lifelines Groups have ongoing work programmes termed lifeline projects. Lifeline projects are a collaborative effort to reduce risk and assess hazards jointly across multiple organisations and sectors.

Lifelines projects are an effective way for Lifelines Group members to:

- identify local hazards and risks
- identify interdependencies across lifeline utilities, and
- discuss and develop plans that enable lifeline utilities to meet their obligations under the CDEM Act 2002.



Most Lifelines Groups have completed projects and presented their findings in reports which are available through their Lifelines Group website, or on the MCDEM website [www.civildefence.govt.nz](http://www.civildefence.govt.nz).

Examples of Lifelines Group projects include:

- Vulnerability Assessments which consider the vulnerability of infrastructure across a region to specific hazards and the interdependency of lifeline utilities to each other
- Critical Sites studies identify infrastructure and community sites that are essential in the response and recovery and provide a restoration plan
- Hot Spots are identified locations that have infrastructure necessary to the operation of more than one lifeline utility
- Sector Specific Plans are developed on a regional basis to assess the impact on lifeline utilities of an outage or shortage in one sector. For example, Fuel Contingency Plans, Power Outage Plans, and
- Reconnaissance Plans include pre-determined flights paths and priorities for investigation to maximise the use of critical resources such as helicopters and pilots.

Working together on lifelines projects also promotes inter-organisational relationships which may in turn facilitate easy communication during an emergency response.

Reviews of vulnerability assessments need to be carried out every five to six years, preferably aligned to the CDEM Group Plan to ensure consistency and avoid duplication of effort. The review may consider risks from emerging or evolving hazards, take-up of recent research, and other good practice identified since the previous assessment.

## SECTION 4 LIFELINE UTILITIES COORDINATION

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This section describes the following aspects of lifeline utilities coordination during response:

- Lifeline Utilities Coordination personnel, and
- Sector coordination arrangements

This section focuses on functions at a national or regional level. This information may be applied to a local level, but needs to be adjusted accordingly.

### LUC Manual



The Lifeline Utilities Coordinator Manual (available on the MCDEM website [www.civildefence.govt.nz](http://www.civildefence.govt.nz) on the publications page) provides detailed information on the:

- lifeline utility sectors
- Lifeline Utilities Coordinator (LUC) role and responsibilities
- communication processes
- information management during response, and
- templates for use when EMIS is not available.

### 4.1 About lifeline utilities coordination

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Lifeline utilities coordination is a function carried out during response under the CIMS Operations function. It is most likely to be performed in ECCs, and at the NCMC.

#### Objectives

The objectives of lifeline utilities coordination are to:

- coordinate the actions of lifeline utilities and CDEM organisations to provide a safe and effective response, and
- support the restoration of lifeline services as quickly as possible.

#### Functions

Lifeline utilities coordination functions include:

- managing information flows
- monitoring impacts
- communicating lifeline utility status information within the NCMC or ECC, and
- facilitating any support required by utilities for CDEM or vice versa.

Each ECC has a set of standard operating procedures (SOPs). ECC SOPs need to include procedures for coordinating lifeline utilities. SOPs are also needed for local level EOC and national level NCMC lifelines coordination.

## 4.2 Lifeline utilities coordination personnel

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There are three main roles related to lifeline utilities that may be present at a response coordination centre:

- Lifeline Utilities Coordinator – trained CDEM personnel who coordinate and liaise with lifeline utilities on behalf of the Controller and/or Recovery Manager (see section 4.2.1 Lifeline Utilities Coordinator below)
- Lifeline Utilities Officers – trained CDEM personnel who support the LUC role. NCMC and ECC are recommended to have a number of personnel trained as Lifeline Utilities Officers, and
- Lifeline Liaison – trained lifeline utility personnel who liaise with the LUC on behalf of their lifeline utility (see Lifeline Liaison on page 6).

The roles are assigned before an emergency occurs, and activated if required during an emergency.

### 4.2.1 Lifeline Utilities Coordinator

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The Lifeline Utility Coordinator (LUC) is a non-statutory position responsible for coordinating lifeline utilities on behalf of the Controller (Local, Regional or National) during emergency response and the Recovery Manager throughout recovery activities.

#### CDEM Group LUC



Each CDEM Group is recommended to have at least three people available for the LUC role. These people must meet (or be actively working towards meeting) the competency requirements described in the MCDEM Competency Framework Role Map, available on the MCDEM website [www.civildefence.govt.nz](http://www.civildefence.govt.nz).

Detailed LUC guidance is available in the Lifeline Utilities Coordinator Manual on the MCDEM website [www.civildefence.govt.nz](http://www.civildefence.govt.nz)

#### National LUC

If the National LUC role is activated, that person will often provide support to regional lifeline utilities coordination, including coordinating deployment of LUCs from other regions if required.

When the LUC role is active at both national and regional level, responsibility for communications must be clearly defined. The level of activation for the NCMC will often determine the degree of leadership taken by NCMC.

## LUC's responsibilities

During readiness, the LUC's responsibilities include:

- participating in capability development
- participating in exercises
- establishing relationships and contacts
- establishing lifeline utility sector planning arrangements
- establishing ECC access.

During response, the LUC's responsibilities include:

- gathering lifeline utility impact information
- making initial notifications
- establishing and maintaining contact with lifeline utilities
- assessing LUC personnel requirements
- activating SCEs
- maintaining contact with the NCMC LUC
- reviewing lifeline utility status reports
- contributing to the ECC situation reports
- advising the Group Controller of lifeline sector needs and developments
- liaising with other ECC managers and liaison officers
- participating in ECC meetings
- advising lifeline utilities of priorities and tasks
- responding to requests for assistance from lifeline utilities
- identifying and assessing common resource requests
- responding to unforeseen risks to lifelines, and
- carrying out other managerial duties.

### 4.2.2 Sector coordinating arrangements

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SCEs have been established in many lifeline utility sectors as a means of prearranged national and regional sector coordination. They were initially established as a means of national coordination but regional sector coordinating entities have emerged in some sectors in response to regional readiness and response needs.

When the National LUC is activated during response:

- the chairs of SCEs become the primary point of contact for their sector to the NCMC LUC, and
- lifeline utility status reports are usually collated by the chair of the respective SCE before being provided to the NCMC LUC.



The Guide to the National Civil Defence and Emergency Management Plan (available on the MCDEM website [www.civildefence.govt.nz](http://www.civildefence.govt.nz) on the publications page) provides more information on SCE's.

## SCEs

SCEs established for coordination of national lifeline utilities activities include:

- telecommunications – the Telecommunications Emergency Forum (TEF) includes all of the major fixed line and mobile network operators
- gas – the gas sector has standing arrangements that include the gas sector critical contingency operator and LPG distributors
- electricity – as the operator of the national grid, Transpower maintain SCE responsibilities for the electricity sector, including coordinating information from lines companies
- petroleum fuel – SCE arrangements are detailed in the National CDEM Fuel Plan, which has been supplemented by a number of regional fuel plans
- transport – the Transport Response Team (TRT) includes road, rail, sea and air transport, and
- water and waste water – there is no national SCE arrangement. Clarification of regional sector arrangements is the mutual responsibility of water utilities and CDEM organisations.

# SECTION 5 APPENDICES

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## APPENDIX A ABOUT CDEM



This is a brief overview of CDEM intended for people who have not been involved in CDEM before. More information is available in the Guide to the National CDEM Plan, available at [www.civildefence.govt.nz](http://www.civildefence.govt.nz).

Ministry of Civil Defence & Emergency Management (MCDEM) is the central government agency responsible for providing leadership, strategic guidance, national coordination, and the facilitation and promotion of various key activities across the 4Rs. It is the lead agency at a national level responsible for coordinating the management of CDEM emergencies. MCDEM may act as a support agency by coordinating the CDEM response to any given emergency managed by another lead agency. MCDEM is responsible for maintaining the National Crisis Management Centre (NCMC) in a state of readiness and for the National Warning System.

CDEM Groups are required under the CDEM Act 2002. Every unitary authority, and each regional council and every territorial authority within that region, has established a CDEM Group.

### Business as usual CDEM structure

The general structure of a CDEM Group is shown in Figure A-1 below. Variations to this structure are discussed in the next paragraph.

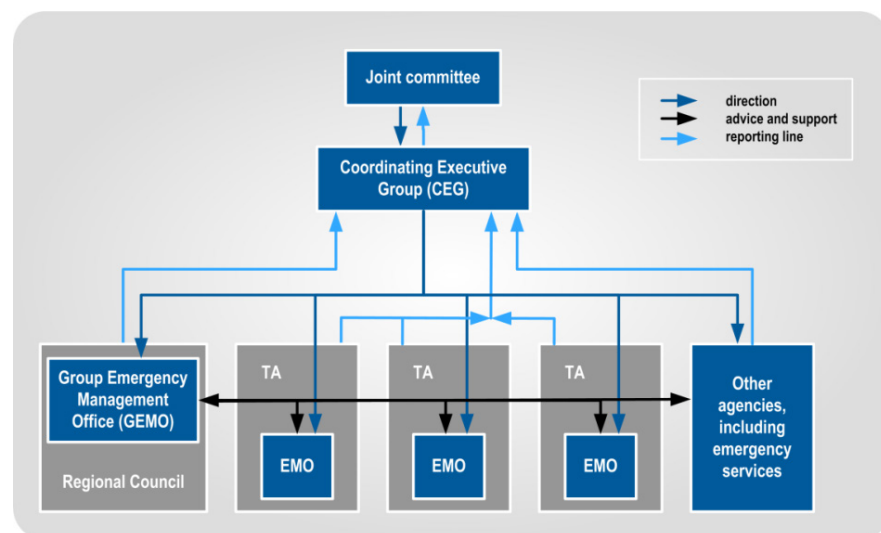


Figure A-1 CDEM structure for business as usual

The Joint Committee is made up of representatives of member authorities, such as mayors, chairpersons, or delegates. In CDEM Groups with a unitary authority structure, the Joint Committee is a committee of council.

The Coordinating Executive Group (CEG) is made up of chief executives of the local authorities, and representatives of emergency services, health services, and others.

Group Emergency Management Office (GEMO) is the CDEM Group's regionally based emergency management office. CDEM Groups sometimes use different terms for these.

Emergency Management Office (EMO) is a CDEM Group's locally based emergency management office. CDEM Groups sometimes use different terms for these.

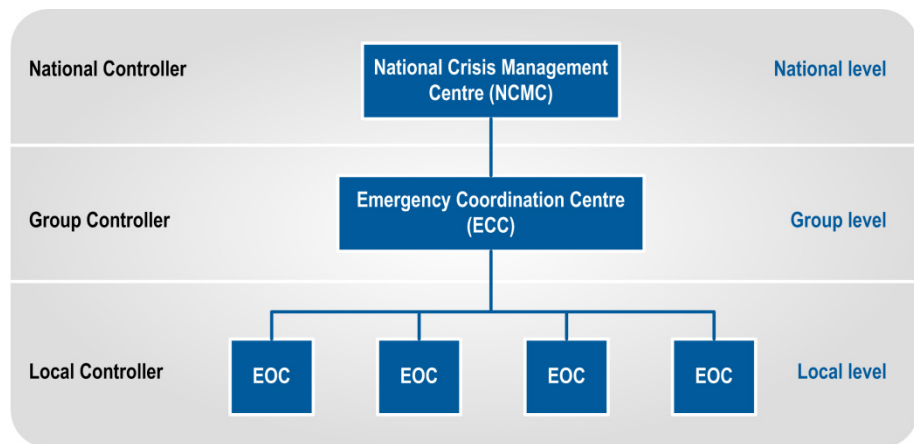
**Variations in CDEM Group structure**

CDEM structures vary significantly in the different Groups. The CDEM Group Plan will show their particular structure. The main variations in structures are:

- GEMO with no local EMO(s) (includes unitary authorities)
- all or some of the EMOs reporting through the GEMO, rather than through the territorial authorities
- pooling territorial resources to jointly provide all CDEM functions in the CDEM Group’s region
- grouping EMOs under area offices over several local councils, and
- the CDEM Group contracting out provision of CDEM to a third party, who report directly to the CEG.

**CDEM response structure**

The structure of a national emergency response is shown in Figure A-2 below:



**Figure A-2 CDEM structure during response**

The Controller is the person in charge of the response, at the respective level.

The National Crisis Management Centre (NCMC), ECC, and EOC (at national, CDEM Group, and local level respectively) are structured according to the Coordinated Incident Management System (CIMS) (see CIMS on page 32 for more information).

During and following an emergency, the:

- ECC (Emergency Coordination Centre) is a facility that operates at the CDEM Group level to coordinate and support one or more activated EOCs.
- EOC (Emergency Operations Centre) is a facility that operates at a local level to manage the response.

## Commonly used CDEM terms

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### General terms

A CDEM organisation is any part of a CDEM Group or local authority that has responsibilities in CDEM.

A CDEM Group Plan has been developed and is regularly reviewed by each CDEM Group, required under the CDEM Act 2002.

Agencies are government agencies (including public service departments, non-public service departments, Crown entities, and Offices of Parliament), non-governmental organisations, and lifeline utilities.

The lead agency is the agency that manages a particular emergency. Some agencies are required by law to lead particular types of emergencies; other types of emergencies will have the lead agency determined by expertise.

A support agency is any agency that supports the lead agency during an emergency.

National Crisis Management Centre (NCCMC) can refer to either the secure all-of-government facility maintained in a state of readiness in which the national response to emergencies can be managed, or the team that operates from this facility.

### The '4Rs'

The '4Rs' of emergency management are:

Risk reduction means identifying and analysing long-term risks to human life and property from natural or non-natural hazards, taking steps to eliminate these risks if practicable, and, if not, reducing the magnitude of their impact and the likelihood of their occurring.

Readiness means developing operational systems and capabilities before an emergency happens, including self-help and response programmes for the general public, and specific programmes for emergency services, lifeline utilities, and other agencies.

Response means actions taken immediately before, during, or directly after an emergency to save lives and property, and to help communities recover.

Recovery means the coordinated efforts and processes used to bring about the immediate, medium-term, and long-term holistic regeneration of a community following an emergency.

### Terms used in local government

A territorial authority (TA) is a city or district council, or unitary authority.

A regional council is a region-based council, primarily responsible for environmental management.

A unitary authority is a territorial authority with regional council functions and powers.

A local authority is any of the above.

## CDEM roles

The Director of CDEM (the Director) is the head of MCDEM, who reports to the Minister of Civil Defence. The Director has the role of National Controller during an emergency led by CDEM, unless they choose to delegate.

The GEMO Manager is the person who manages the GEMO.

The Emergency Management Officer (EM Officer) is the person who manages the EMO.

Regional Emergency Management Advisors (REMAs) are MCDEM personnel, based at MCDEM's regional offices in Auckland, Wellington and Christchurch. They are responsible for providing advice and support to the CDEM Groups in their geographic area.

The Controller is the person in charge of an emergency, or an aspect of it. The level of their control is given by the name – National Controller (usually based at the NCMC), Group Controller (usually based at an ECC), and Local Controller (usually based at an EOC).

The Recovery Manager is the person in charge of recovery. When emergencies will have significant recovery activities, the Controller hands over to the Recovery Manager once most response tasks have been completed.

## Key CDEM documents

The following documents are available at [www.civildefence.govt.nz](http://www.civildefence.govt.nz) by searching for the document name.

The Civil Defence Emergency Management Act 2002 (CDEM Act 2002) describes the legal requirements for CDEM in New Zealand.

The National CDEM Strategy describes the intentions of the Crown regarding CDEM provisions.

The National CDEM Plan mandates the actions required across the 4Rs (risk reduction, readiness, response, and recovery) and who is required to carry them out.

The Guide to the National CDEM Plan explains the National CDEM Plan in detail.

Director's Guidelines are documents developed by MCDEM, to provide guidance to CDEM and other agencies regarding CDEM. They are issued by the Director of CDEM under the CDEM Act 2002.

## EMIS

The emergency management information system (EMIS) is used by CDEM organisations to record data and maintain situational awareness during an emergency response. EMIS is used to generate situation reports, action plans, and maps.

## CIMS

The Coordinated Incident Management System (CIMS) is a proactive incident management framework, used by New Zealand agencies when responding to emergencies. It is intended to achieve effective response management and multi-agency coordination for all incidents, regardless of hazard, size, or complexity. It aims to coordinate separate agency operations into a single, unified response.

There are seven CIMS functions:

- Control is responsible for the overall direction and management of an emergency, or an aspect of it (see 'Controller', under 'Roles' on previous page).
- Operations is responsible for the coordination of the response, detailed task planning, and the implementation of the Action Plan.
- Planning is responsible for planning operations.
- Intelligence is responsible for hazard and environmental analysis, and collating information about the response.
- Welfare is responsible for coordinating and delivering emergency welfare services and resources to affected individuals, families/whānau, and communities.
- Logistics is responsible for sourcing resources needed to support the response and the affected population, including personnel, equipment, and transportation.
- Public Information Management (PIM) is responsible for releasing information to the public, media liaison, and community liaison. The content of official information (such as warnings) is generated by official processes, and approved by the Controller.

The Incident Management Team (IMT) consists of the key appointments within a response coordination centre - the Controller and Response Manager; the functional managers (Operations, Planning, Logistics, Intelligence, PIM, and Welfare); technical experts such as scientific advisors; and key support agency representatives such as the Fire Service, Police, or representatives of hospitals and health services. The exact composition at any time is determined by the Controller.

Naming indicates where it is based, and the agency (if applicable). For example, CDEM ECC IMT means the CDEM IMT based at the ECC, and the Police Wainui IMT is the Police IMT based at Wainui.



More information about CIMS is provided in the Coordinated Incident Management System (CIMS) manual, available on the publications page of the MCDem website [www.civildefence.govt.nz](http://www.civildefence.govt.nz).

## APPENDIX B RELEVANT EXTRACTS FROM THE CDEM ACT 2002

### SCHEDULE 1 OF THE CDEM ACT 2002

#### LIFELINE UTILITIES

##### Part A

##### Specific entities

- (1) Radio New Zealand Limited and Television New Zealand Limited.
- (2) The company (as defined in section 2 of the Auckland Airport Act 1987) that operates Auckland international airport.
- (3) The company (as defined in section 2 of the Wellington Airport Act 1990) that operates Wellington international airport.
- (4) The airport company (as defined in section 2 of the Airport Authorities Act 1966) that operates Christchurch international airport.
- (5) The entity (being an airport authority as defined in section 2 of the Airport Authorities Act 1966, whether or not it is also an airport company as defined in that section) that operates the primary airport at Bay of Islands, Blenheim, Dunedin, Gisborne, Hamilton, Hokitika, Invercargill, Napier, Nelson, New Plymouth, Palmerston North, Queenstown, Rotorua, Tauranga, Wanganui, Westport, Whakatane, or Whangarei.
- (6) The port company (as defined in section 2(1) of the Port Companies Act 1988) that carries out port-related commercial activities at Auckland, Bluff, Port Chalmers, Gisborne, Lyttelton, Napier, Nelson, Picton, Port Taranaki, Tauranga, Timaru, Wellington, Westport, or Whangarei.
- (7) Schedule 1 Part A clause 6: amended, on 25 March 2012, by section 10 of the Civil Defence Emergency Management Amendment Act 2012 (2012 No 6).
- (8) The Grey District Council, acting as the Greymouth harbour authority and owner and operator of the Port of Greymouth under Parts 4 and 6 of the Local Government (West Coast Region) Reorganisation Order 1989, Part 39A of the Local Government Act 1974, and section 16 of the Local Government Amendment Act (No 2) 1999.

##### Part B

##### Entities carrying on certain businesses

- (1) An entity that produces, supplies, or distributes manufactured gas or natural gas (whether it is supplied or distributed through a network or in bottles of more than 20 kg of gas).
- (2) An entity that generates electricity for distribution through a network or distributes electricity through a network.
- (3) An entity that supplies or distributes water to the inhabitants of a city, district, or other place.
- (4) An entity that provides a waste water or sewerage network or that disposes of sewage or storm water.
- (5) An entity that provides a telecommunications network (within the meaning of the Telecommunications Act 1987).
- (6) An entity that provides a road network (including State highways).
- (7) An entity that produces, processes, or distributes to retail outlets and bulk customers any petroleum products used as an energy source or an essential lubricant or additive for motors for machinery.
- (8) An entity that provides a rail network or service.

## GENERAL DUTIES OF GOVERNMENT DEPARTMENTS AND OTHERS

### 59 Departments and others to undertake civil defence emergency management functions and responsibilities

Every department, Civil Defence Emergency Management Group, local authority, emergency service, and lifeline utility, and any other person required by this Act or any regulations made under this Act, or any civil defence emergency management plan, to undertake civil defence emergency management or to perform any functions or duties, must take all necessary steps to undertake civil defence emergency management or to perform those functions.

### 60 Duties of lifeline utilities

Every lifeline utility must—

- (a) ensure that it is able to function to the fullest possible extent, even though this may be at a reduced level, during and after an emergency;
- (b) make available to the Director in writing, on request, its plan for functioning during and after an emergency;
- (c) participate in the development of the national civil defence emergency management strategy and civil defence emergency management plans;
- (d) provide, free of charge, any technical advice to any Civil Defence Emergency Management Group or the Director that may be reasonably required by that Group or the Director;
- (e) ensure that any information that is disclosed to the lifeline utility is used by the lifeline utility, or disclosed to another person, only for the purposes of this Act.

### 61 Schedule 1 may be amended by Order in Council

- (1) The Governor-General may, by Order in Council made on the recommendation of the Minister,—
  - (a) add the name of an entity or description of an entity to Part A of Schedule 1; or
  - (b) omit the name of an entity or description of an entity from Part A of Schedule 1; or
  - (c) amend the name of an entity or the description of an entity in Part A of Schedule 1; or
  - (d) add a description of a class of business to Part B of Schedule 1; or
  - (e) omit a description of a class of business from Part B of Schedule 1; or
  - (f) amend the description of a class of business in Part B of Schedule 1; or
  - (g) otherwise amend Schedule 1 or revoke Schedule 1 or a part of the schedule, and substitute a new schedule or a new part, as the case may require.
- (2) The Minister must not recommend the addition of the name of an entity or description of an entity to Part A of Schedule 1 unless the Minister is satisfied that the entity operates a service or system the reduced availability, or non-availability, of which would constitute a hazard.
- (3) The Minister must not recommend the addition of a description of a class of business to Part B of Schedule 1 unless the Minister is satisfied that the business provides a service or system the reduced availability, or non-availability, of which would constitute a hazard

### 62 Minister may exempt lifeline utility

The Minister may, by notice in the Gazette, on any conditions that the Minister thinks fit, exempt a particular entity described in, or carrying on a business described in, Schedule 1 in whole or in part from the provisions of this Act relating to lifeline utilities if the Minister is satisfied that the application of the provisions is not appropriate in the case of that entity.

## APPENDIX C SUMMARY OF TASKS AND RESPONSIBILITIES

This appendix provides a summary of responsibilities that relate to lifeline utilities, for both lifeline utilities and their partners in CDEM.

### C.1 Risk reduction and readiness

Organisation	Responsibilities	Working with
All lifeline utilities	ensuring they are able to function to the fullest possible extent, even though this may be at a reduced level, during and after an emergency	
	Undertaking hazard and risk analysis and carrying out risk mitigation measures	
	developing, maintaining, and exercising coordination processes for responses to emergencies	CDEM Groups, and SCEs as appropriate
	providing advice to CDEM Groups and MCDEM	Lifelines Groups
	participating in Lifelines Group activities	Lifelines Groups
	carrying out business continuity management	
	preparing for own emergency response	
	participating in regional and national exercises	CDEM Groups and MCDEM
National lifeline utilities	contributing to developing and maintaining sector coordinating entities	MCDEM
Lifelines Groups	leading lifelines projects, in particular summarising and reporting on risks and hazards for lifeline utilities in their region	
	facilitating engagement among lifeline utilities, and between lifeline utilities and CDEM Groups	lifeline utilities, CDEM Groups
	encouraging and supporting lifeline utilities in identifying hazards and the associated risks	
	developing and promoting emergency preparedness best practice	
	carrying out risk reduction and readiness initiatives that involve more than one utility	
CDEM Groups	appointing regional LUCs	
	promoting coordinated arrangements for response and recovery	
	coordinating CDEM planning and readiness across lifeline utilities, lifeline utility sectors, and other agencies	lifeline utilities, Lifelines Groups
	supporting Lifelines Groups engagement with lifeline utilities	Lifelines Groups
	setting regional strategic priorities and goals, and incorporating these consistently into local and regional planning	Lifelines Groups and Sectors
	developing, maintaining, and exercising coordination processes for regional responses to emergencies	regional lifeline utilities/ LUC
	ensuring ECC facilities will be available for the LUC during response (including communications), and maintaining emergency contact lists	

Organisation	Responsibilities	Working with
LUCs	developing relationships with GEMO/ECC and EMO/EOC personnel	council CDEM personnel
	developing relationships with relevant sector coordinating entities	SCEs
	participating in CDEM exercises and training for LUCs	CDEM Groups/MCDEM
SCEs	carrying out the same requirements as those for clusters as described in the National CDEM Plan, and the Guide to the National CDEM Plan	
	participating in national and regional exercise and planning activities	CDEM Groups and MCDEM
	developing relationships with relevant lifeline utilities coordinators	LUCs

## C.2 Response and recovery

Organisation	Responsibilities	Working with
All lifeline utilities	activate emergency management and/or business continuity plan	internal
	undertake impact assessment	Internal
	inform CDEM EOC/ECC/NCMC of: <ul style="list-style-type: none"> <li>operation status</li> <li>any CDEM critical customer implications</li> <li>service restoration projections</li> <li>any resource requirements necessary to restore service that cannot be met by the lifeline utility</li> </ul>	internal, CDEM EOC/ECC/NCMC
	remain available to CDEM EOC/ECC/NCMC (through the LUC or appropriate officer)	internal, CDEM EOC/ECC/NCMC
	participate in sector coordination activities as appropriate	other lifeline utilities
SCEs	activate sector coordinating entities (SCE) arrangements if appropriate (referencing SCE SOPs), and notify the ECC/NCMC	other lifeline utilities
CDEM Groups	activate regional LUCs as appropriate	internal
	carry out all LUC functions described under LUCs (below), via LUC role if activated	lifeline utilities
	providing facilities for the LUC team during response (including communications and information management)	
LUCs (carried out by other ECC personnel if LUC role is not activated)	coordinate CDEM planning and response across utilities, sectors, and other agencies	other CDEM personnel, lifeline utilities
	roster lifelines coordination and support human resource as appropriate	other CDEM and lifeline utility personnel
	provide regular lifeline utilities updates to Intelligence, Operations manager, the Controller, and lifeline utilities as appropriate	other CDEM personnel, lifeline utilities
MCDEM	manage processes to coordinate across sectors at a national level	national lifeline utilities, SCEs, and NCMC LUCs

## APPENDIX D LIFELINE UTILITY SECTORS



This appendix provides a brief description of the lifeline utility sectors in New Zealand, and some of their interdependencies.

See the Lifeline Utilities Coordinator Manual (available on the MCDEM website [www.civildefence.govt.nz](http://www.civildefence.govt.nz) on the publications page) for a more detailed description of the sectors.

### D.1 Energy

The energy sectors include electricity, fuel, and gas.

#### Fuel

About three quarters of New Zealand's fuel is refined at the Marsden Refinery. Most of Auckland's fuel is transported via the Marsden-Wiri pipeline. The rest of New Zealand's fuel is shipped to ports around the country.

The fuel distribution network is schematically illustrated in Figure D-1 below.

Features of the fuel sector are:

- most disruptions to the bulk distribution network are managed by adjusting the transmission of fuel around the national supply chain
- the National CDEM Fuel Plan (and regional plans, where they exist) provides a readiness planning framework for the fuel sector and CDEM, and
- the fuel sector is highly dependent on electricity, on the transport sector (especially road and marine), and on water (for firefighting).

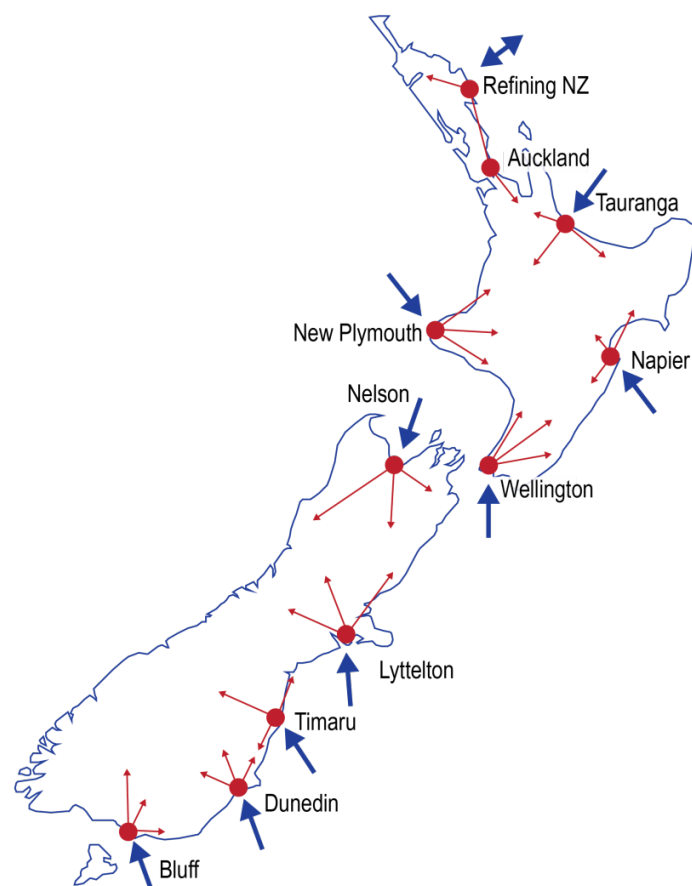


Figure D-1 Fuel distribution network

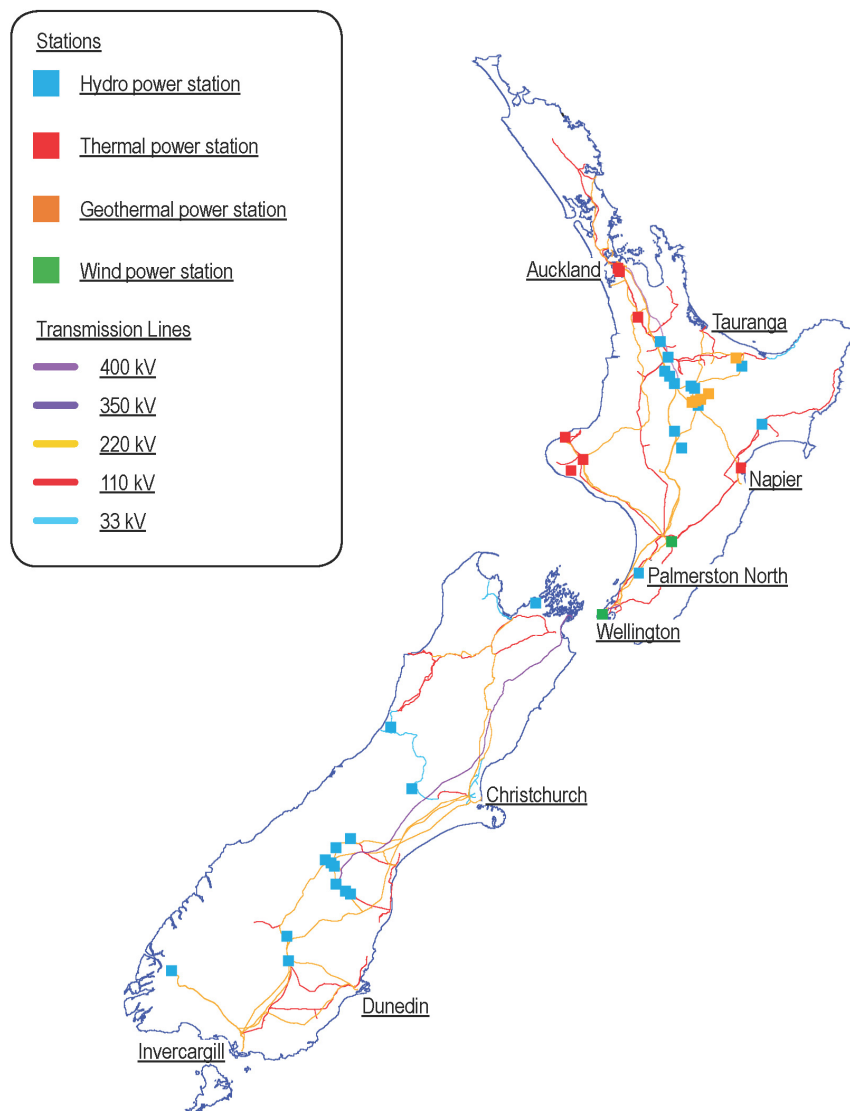
## Electricity

The electricity sector in New Zealand comprises:

- generators – the power stations that produce electricity
- transmission – the wires and cables (the national grid) that transport electricity at high voltages from power stations to distribution networks and to the largest industrial users (called direct consumers)
- distributors – the local networks that carry electricity from the national grid to residential, commercial and smaller industrial users
- retailers - the participants that buy wholesale electricity and on-sell it to consumers, and
- system operator – Transpower manages the real-time operation of New Zealand's power system.

Features of electricity networks include:

- failure of services along a spur that supplies a region may cause region-wide failures, and
- most lifeline utility sectors are dependent on the electricity sector. Many lifeline utilities have backup generators at critical sites, but few have the capability to fully function in a widespread, prolonged electricity outage.



**Figure D-2 National grid**  
Based on a graphic provided by Transpower

## Gas

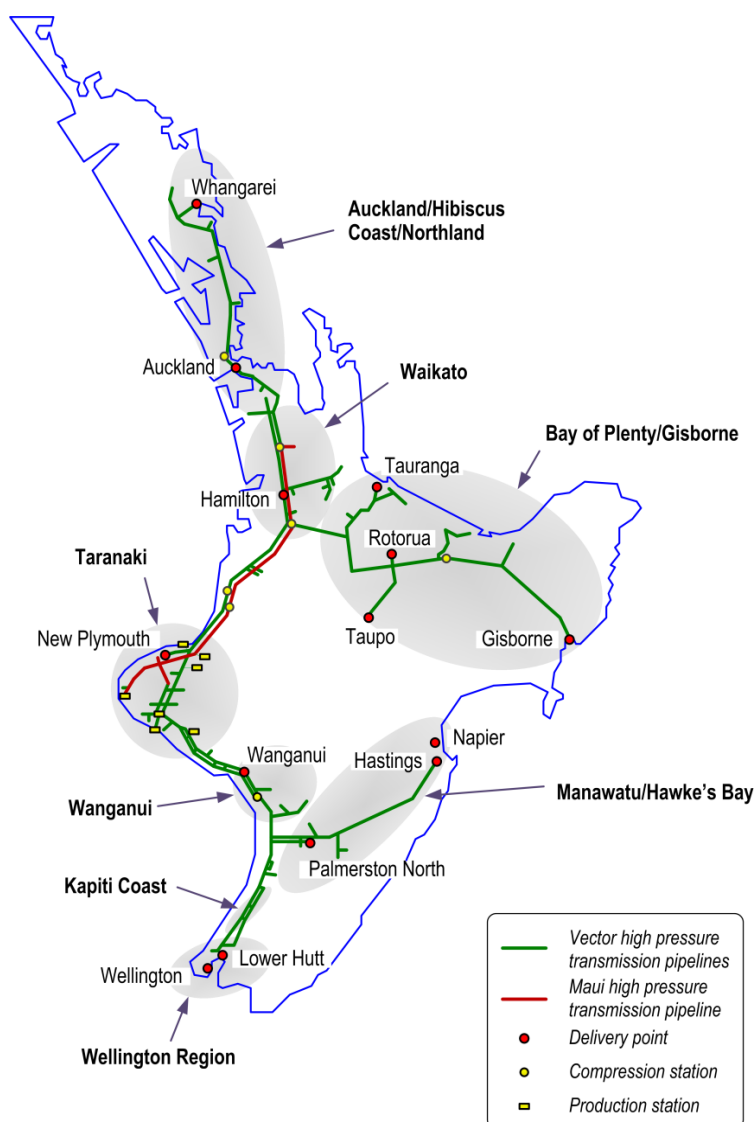
Gas is produced in the Taranaki region, and distributed by high pressure transmission lines to a number of North Island regions, as shown in Figure D-3 below.

Some cities and towns outside these areas have reticulated networks supplied by bulk vessels. Gas (LPG) is distributed in main centres in the South Island, mainly via cylinders. Christchurch features a reticulation network of approximately 180km.

Gas is the source of fuel for 20% of New Zealand's electricity generation.

Features of the gas network are:

- the gas industry maintains Critical Contingency arrangements and appoints a Critical Contingency Operator which is responsible for operating the transmission network in emergencies, and
- lifeline utilities that are critically reliant on reticulated gas need to apply for 'essential service provider' status.



**Figure D-3 High pressure gas transmission network**  
*Adapted from an image owned by Vector Limited*

## D.2 Water

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### Water supply

Few lifeline utility sectors rely on water supply for their own service to function, with some exceptions where it is a requirement as a coolant or for fire fighting. However, potable water is a critical lifeline for communities.

Water supply networks rely on electricity for pumping and treatment, and on telecommunications for control systems (these usually have manual alternatives). If network infrastructure is significantly damaged (such as in an earthquake), stored water can be lost very quickly through breaks and leaks.

### Wastewater

Wastewater systems require electricity for pumping and treatment. During response the main focus is on ensuring that any overflows are to watercourses that won't impact human health and safety, and keeping people away from water contaminated with sewage.

### Stormwater

Stormwater systems have limited reliance on electricity as most networks discharge stormwater entirely by gravity.

## D.3 Telecommunications

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The telecommunications sector is one of the most complex of the lifeline utility sectors.

### Mobile (cellular) networks

There are four major building blocks to cellular networks.

- cell sites provide the local coverage
- transmission links connect the cell site to the aggregation node and the aggregation node to the exchange
- aggregation nodes are either base station controllers or radio network controller, and
- exchanges (mobile telephony) make the connection between the caller and the called. If the transmission links are broken, the call cannot be completed.

Because of the dependence of mobile telecommunication sites on electricity supply, there are a range of backups if mains supply fails, including batteries, generators, and generator plugs.

#### Fixed line networks

The network of roadside cabinets house both digital subscriber line broadband connections, and landline phone services. These cabinets rely on electricity and have limited battery backup.

Telephone exchange buildings (local exchanges) provide connections to customer premises. They rely on electricity and have battery backup, plus either fixed diesel generators or a generator plug.

If an exchange becomes isolated from the nationwide network, local phones are able to call other local phones, and there are processes in place to reroute 111 services.

#### National and international telephone connections

Phone companies usually provide their own intercity and inter-island connections.

International connections are mainly provided by undersea cable. Satellite connections may have limited capacity.

## D.4 Broadcasting

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The broadcasting sector contains both broadcasters (television and radio), and infrastructure providers.

The broadcasting sector relies on electricity, and the infrastructure has back-up systems in place. Broadcasting is an essential source of information for the community during and following an emergency.

## D.5 Transport

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Transport is a dependency for all lifeline utility sectors. During response it is needed to move personnel and equipment that are needed to carry out repairs and restore lifeline services.

#### Roads

The New Zealand Transport Agency (NZTA) owns and manages the network of State Highways while local authorities own and manage the local road network.

Most regions maintain a list and maps of 'priority routes', identifying the most critical roads to maintain and/or restore during and following emergencies.

## Ports

The major ports in New Zealand are Tauranga, Auckland, Lyttelton, Napier, Otago, and Wellington. Other ports have strategic importance as an alternative transport route.

The maritime industry is largely operated by the private sector, although a number of local authorities have an ownership interest in their local ports.

Most ports have some level of backup electricity generation to enable critical safety functions to operate in an electricity failure.

## Airports

Airport operations depend on a number of other lifeline utilities to maintain a safe and hygienic airport environment, to process customers and freight, and to control air traffic. The larger airports have backup power generation and water storage to enable the airport operations to function.

Most of the air services sector is privately owned, with the government role primarily as policy maker and regulator.

## Rail

Rail transport is used for high volume and heavy freight, and also carries large numbers of urban commuters in both Auckland and Wellington. Few routes have alternate routes if a route fails.

## D.6 Non-formal lifeline utility sectors

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Some organisations and sectors may be as important to the CDEM response as defined lifeline utilities despite not being included in Schedule 1 of the CDEM Act 2002. Some examples are fast moving consumer goods (typically focused on groceries), banking, and solid waste management.

When practicable, CDEM organisations are encouraged to include these non-formal lifeline utility sectors.

## APPENDIX E LIFELINE UTILITY CDEM READINESS CHECKLIST

This checklist is for use by lifeline utility personnel responsible for pre-emergency planning.

It is intended to be adapted to suit the purposes of the lifeline utility.

References are to sections in Lifeline utilities and CDEM Director's Guideline.

### Working in partnership

(see section 3.1 Working in partnership on page 17)

Contact is maintained with:			
CDEM Group GEMOs and EMOs		sector coordinating entity	
CDEM Group LUC Manager		other sector organisations	
Lifelines Group		emergency services	
participation in:			
Lifelines Group activities		sector organisations activities	

### Business continuity management

(see section 2.1.2 Business continuity management on page 12)

Business continuity plans include:			
identification of critical business functions and processes, and potential impacts on them are defined			
required service levels (including load-shedding, restoration priorities, and CDEM-critical activities) determined in collaboration with key customers, other lifeline utilities, and with the CDEM Group			
contingency planning for damaged and affected functions, services, and networks,			
risk reduction for network assets, key facilities, and other service delivery mechanisms			
plans that are exercised, and validated with external agencies, including contractors if applicable			
monitoring and evaluation processes			
Response plans include:			
emergency workspace location and back-up		personnel have emergency plans for home	
response personnel, including Lifeline Liaison to ECC, a spokesperson, and rostered backups			
means of communication internally, as well as with GEMO, LUC, and SCE			
required resources including remote data access capability and copies of required documents			

### Providing advice

(see section 2.1.3 Providing information and advice on page 13)

contributes to CDEM Group Plan reviews directly / through Lifelines Group or sector organisation			
submits feedback to MCDEM when requested, regarding national CDEM documents			

### Capability development

(see section 2.1.4 Capability development on page 13)

Training tasks carried out:			
skill gaps are identified		response personnel participating in exercises	
potential programmes by CDEM and external organisations are identified		training and development programmes for individual personnel developed	
ongoing arrangements for the lifeline utility to participate regularly in CDEM exercises			



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