

ANNEX 8: ENGINEERING LIFELINE UTILITIES

This Annex on utilities provides an overview of the services that are provided by each utility sector in Hawke's Bay and what their responsibilities are leading up to and during a state of local emergency.

Following a state of local emergency, it is expected that each utility organisation will, if necessary, under take its own measures to restore full services, as quickly as possible, to its customers within the region.

8.1 Requirement of the Civil Defence Emergency Management Act 2002

Section 60 of the Act sets out the duties of all the engineering lifeline utilities. Each lifeline utility is expected to 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.

Utility organisations are also to provide, free of charge, any technical advice to the CDEM Group that may be reasonably required.

8.2 Electric Power Supply

8.2.1 Overview

The New Zealand electricity system consists of power stations (generators), high voltage power lines (transmission) and low voltage power lines (distribution), which link together to get power to customers. Retailers then sell the power to consumers.

The major generators in New Zealand are Meridian Energy, Contact, Genesis Power, and Mighty River. As generators, these companies own and operate New Zealand's major power stations and feed electricity into the national grid.

Transpower owns and operates the national grid. This is the high-voltage cable transmission system. The national grid transports electricity across the country.

Unison Networks Ltd, Eastland Networks and Centralines Ltd are the distribution organisations (lines companies), which own the power lines in Hawke's Bay.

There are many electricity retailers that operate in Hawke's Bay, selling the power to customers.

The *National CD Plan* requires Transpower New Zealand Ltd to:

- a) Mobilise resources to restore the electricity transmission network as necessary to meet the required priority demands;
- b) Provide representation in the NEOC to advise on electricity generation and transmission; and
- c) Maintain a register of emergency contacts for electricity supply and distribution.

8.2.2 Responsibilities

Transpower is responsible for the high-voltage transmission lines. The supply of high-voltage electricity to Hawke's Bay is controlled at the Bunnythorpe Sub-station. There is a 220 Kv line from Wairakei to Whirinaki, and a 110 Kv line from Tuai to Redclyffe, Wairoa and Gisborne.

There is an alternative high-voltage (110 Kv) line via the Bunnythorpe sub-station. This could be provided by re-commissioning a dormant supply link through a managed 'break' located in Central Hawke's Bay or Fernhill.

8.2.3 Emergency Plans

Transpower and the local lines companies have formalised arrangements for dealing with emergencies and have documented plans and procedures in place. This documentation is held at each sub-station and control centre.

The electrical distribution companies in Hawke's Bay have a Regional Electricity Advisor, who will liaise with the Group Controller and provide advice on restoration and operation of electricity supplies in the region. (See the Keylinks document for contract details.)

8.2.4 Operating in a state of local emergency

Following a declaration of a state of local emergency the Group Controller will, if necessary:

- a) Ascertain from the Regional Electricity Adviser:
 - i. The current status of the high-voltage supply network into Hawke's Bay;
 - ii. The status of the distribution substations;
 - iii. The extent of any outages; and
 - iv. The likely date/time for reinstatement.
- b) Disseminate the information to the Territorial Local Authorities and subsequently keep them informed as to the status and operational capabilities of the high-voltage power until full reinstatement to the nomination substations has been established.
- c) Consult any affected Territorial Local Authorities and promote and co-ordinated the re-establishment of services based on Civil Defence recovery priorities as provided in the CDEM Group Plan section 8.1.
- d) In consultation with Regional Electricity Adviser keep the public informed of the status of high-voltage electrical supply and as appropriate, through the public information programme, advise on alternative energy options or restricted use until normal supply is achieved.

8.2.5 Priorities

The Group or Local Controller in consultation with Unison Networks Limited, Eastland Networks, and Emergency Services Advisors will set priorities for the restoration of services. For planning purposes the priorities will be:

- Medical facilities - including hospitals.
- Emergency Operations Centres - and community Civil Defence Centres.

- Energy Control Centres.
- Communications networks.
- Water and sewage pumping.
- Stormwater pumps;
- Gas production facilities.
- Liquid fuel pumping and delivery.
- Domestic/commercial/industrial uses.
- Other purposes.

8.3 NATURAL GAS SUPPLY

8.3.1 OVERVIEW

The *National CD Plan* requires the Natural Gas Corporation of New Zealand (NGC) to:

- a) In an emergency NGC, as the organisation responsible for operation of the Kapuni Gas Treatment Plant, the Natural Gas Transmission Pipelines, and some Gas Distribution Networks throughout the North Island would mobilise resources to ensure safety of supply on its own assets, and to maximise gas availability where it is practicable.
- b) Co-ordinate with CDEM and other gas producers/ transporters in the control of gas supplies to agreed priority consumers in any shortage situation.
- c) Act as one of the co-ordinators for the Gas Industry Mutual Aid Plan, which provides for resources to assist in restoration of supplies to all consumers throughout the country.

8.3.2 Responsibilities

The Natural Gas Corporation is responsible for the bulk gas supply through the high-pressure pipeline between Kapuni and the "Gate Station" in Karamu Road South, Hastings.

PowerCo NZ Limited is responsible for the bulk supply through their Intermediate Pressure (IP) pipeline, which terminates at Whirinaki. They are also responsible for distribution to users through many distribution regulation stations.

Nova Gas is responsible for the bulk supply through their Intermediate Pressure (IP) pipeline, which terminates at Whakatu.

The gas distribution companies in Hawke's Bay have a Regional Gas Advisor, who will liaise with the Group Controller and provide advice on restoration and operation of gas supplies in the region. (See the Keylinks document for contract details.)

8.3.3 Operating in a state of local emergency

Following a declaration of a state of local emergency the Group Controller will, if necessary:

- a) Establish contact with Natural Gas Corporation through 'Gas Control' at Bell Block (New Plymouth) and ascertain the status of the transmission pipeline supply between Kapuni and Hastings.

- b) Establish contact with PowerCo NZ Limited and Nova Gas, ascertain the status of the IP supply pipelines to Whirinaki.
- c) Promote and co-ordinate the reinstatement of bulk natural gas supply to the Natural Gas Gate Station, Karamu Road Hastings and through the principle distribution points in Napier within Hawke's Bay.
- d) Disseminate the information to the Territorial Local Authorities and update as necessary until normal supply is restored.
- e) In association with PowerCo, Nova Gas and the Territorial Local Authorities, keep the public informed as to the status of the bulk gas supply until the normal supply is restored.

8.3.4 Emergency Plans

All natural gas agencies have *Emergency Contingency Plans* for reinstatement of services following an emergency.

8.4 LIQUID FUEL ENERGY SUPPLIES

Coastal Tankers visit the Port of Napier about once every three weeks discharging various grades of petroleum products, ranging from Premium/Regular Motor Spirit (petrol), Automotive Gas Oil (diesel), aviation gasoline, and heavy fuel oil for ship bunkers (IFO 180) and bitumen. There is no set regular schedule of deliveries, and supplies can vary from 2 weeks to six weeks depending on the time of year and demand for various products.

Petroleum Products are stored in bulk in Napier, from where they are moved to various distributors throughout the region. Petroleum products are trucked up to Wairoa and Gisborne from Napier. Central Hawke's Bay gets some supplies from Napier, while other supplies are trucked in from Palmerston North.

8.4.1 Operating in a state of local emergency

Following a declaration of a state of local emergency the Group Controller will, if necessary:

- a) Promote and co-ordinate the reinstatement of supplies.
- b) Disseminate information to the Territorial Local Authorities and update as necessary until normal supply is restored.
- c) In association with HB Engineering Lifeline Group, industry sector, and the Territorial Local Authorities, keep the public informed as to the status of the petroleum supply until the normal supply is restored.

8.5 TELECOMMUNICATION LINKS

In Hawke's Bay the majority of telecommunication services are provided by three companies, these are:

- Telecom NZ Limited;
- Telstra Clear; and
- Vodafone.

Telecom NZ Limited has services throughout Hawke's Bay supported by copper and fibre cables, microwave and multi-access radio links, coupled with a

cellular network. Telecom uses fibres in a cable that passes through Hawke's Bay and is shared with Telstra Clear. This cable connects to centres to the north and south of Hawke's Bay (via Taupo and Pahiatua) and has maintenance agreements between Telstra Clear and Telecom New Zealand Ltd as to the areas of responsibility. The Telecom network is remotely monitored and managed from a Network Control Centre remote from Hawke's Bay. Maintenance of the network is carried out by contractors (service companies) who are based in the area.

Telstra Clear operates cable and radio access systems within Hawke's Bay. Telstra Clear has an exchange in Napier to manage circuits and calls from its own network and those from other networks that interconnect with Telstra Clear at that point. Connection to the rest of Telstra Clear's network is through fibre optic cables from Taupo (and Auckland) to Napier and south through Hawke's Bay and Wairarapa to Wellington. From Pakipaki to southern Hawke's Bay it shares a duct with Telecom. Telecom is responsible for the maintenance of that section of cable. Telstra Clear manages and monitors services from a duplicated Network Management Centre in Auckland manned 24 hours, 7 days per week.

Vodafone provides cellular services to all the major towns and cities in Hawke's Bay, as well as major roading links through localised microwave stations. Traffic beyond the cities is transmitted through Telecom and Telstra Clear systems.

The National CD Plan requires Telecom New Zealand Ltd to:

- a) Assess damage, liaise with CDEM controllers, determine priorities and restore communications;
- b) Mobilise and at all levels of CDEM organisation co-ordinate the use of all available resources of personnel, plant and equipment, materials and services for the maintenance of CDEM communications and essential services;
- c) Recommend to the CDEM controller the use of alternative (non-Telecom) telecommunications service/network operator's resources of personnel, plant and equipment, material and services for the maintenance of CDEM communications and essential services;
- d) Assist in the dissemination of CDEM warning messages; and
- e) Provide, on request, representation at the NEOC.

8.5.1 Operating in a state of local emergency

Following a declaration of a state of local emergency the Group Controller will, if necessary:

- a) Establish contact with the three Hawke's Bay service providers and ascertain the present status of each service.
- b) Promote and co-ordinate the reinstatement of telecommunications services within Hawke's Bay.
- c) Disseminate information to the Territorial Local Authorities and update as necessary until normal supply is restored.
- d) Should it become necessary, consult Territorial Local Authorities for reinstatement priorities based on the Civil Defence recovery priorities, as specified in the CDEM Group Plan section 8.1.

- e) In consultation with the service providers keep the public informed of the status of telecommunication links and where appropriate encourage people to restrict business or domestic telephone and facsimile services to emergency situations only.

8.5.2 Priorities

The Group or Local Controller in consultation with Telecom Limited, and Emergency Services Advisors will set priorities for the restoration of services. The priorities will take account of the priorities of Telecom and the response priorities listed in section 8.1 of the CDEM Group Plan.

8.5.3 Emergency Plans

Telecom have an *Emergency Preparedness and Response Plan* which provides for surveillance and evaluation of the effects of any event; prioritisation of restoration and management of restoration activities.

Telstra Clear have an *Emergency Preparedness and Response Plan*.

Vodafone has fault recovery procedures and is developing a *National Emergency Preparedness and Response Plan*.

8.6 PUBLIC RADIO

There are a number of radio stations that broadcast in Hawke's Bay. The main ones are listed below:

Radio Network: which includes: Classic Hits 89FM (Bay City Radio); 96ZM; Newstalk ZB; Easy Listening 190; Hauraki 99.9FM; Jammin Oldies 1530 AM; and Radio Sport.

Radio Works: which includes: Hot 93FM (Hastings); The Edge; The Rock; Solid Gold; and Radio Pacific.

The principle Radio Broadcasts transmitted into Hawke's Bay are:

- Radio Pacific (Auckland)
- National Radio (Wellington)
- Newstalk ZB (Auckland)

The *National CD Plan* requires Radio New Zealand Ltd to:

- a) Provide a continuing service through radio at national level; and
- b) Broadcast CDEM warnings, instructions and information, and make these available to clients of Radio NZ news.

There is a Radio Advisory Officer, who will liaise with the Group Controller and provide advice on restoration and operation of radio broadcasts in the region. (See the Keylinks document for contract details.)

8.6.1 Operating in a state of local emergency

Following a declaration of a state of local emergency the Group Controller will, if necessary:

- a) Establish contact with the Network suppliers to ascertain the status of their broadcasting operations.
- b) Promote and co-ordinate priority reinstatement of Radio Stations with collective management and networks with robust transmission across Hawke's Bay.
- c) Disseminate information to the Territorial Local Authorities and update as necessary until normal broadcasts are restored.

8.6.2 Emergency Plans

Each Radio station has plans to reinstate broadcasting services in the event of an emergency. These plans include emergency power for studio and transmission.

8.7 STATE HIGHWAYS

Transit New Zealand is responsible for the management of the state highways. Within Hawke's Bay these are:

- State Highway 2 from Palmerston North to Gisborne via Takapau, Waipukurau, Waipawa, Hastings, Napier and Wairoa.
- State Highway 5 from Esk to Taupo.
- State Highway 38 from Wairoa to Aniwanuiwa (Urewera National Park Headquarters at Lake Waikaremoana).
- State Highway 50 from Takapau to Napier, via Tikokino.

The *National CD Plan* requires Transit NZ to:

- a) Provide representation at the NEOC, and when requested, to CDEM organisations;
- b) Provide information and advice to CDEM organisations on resources and capabilities in order to identify and solve roading, transport and movement control problems; and
- c) Restore the State Highway network to a satisfactory operating condition.

8.7.1 Responsibilities

Opus International Consultants Ltd is responsible for managing the roading network and has engaged contractors to undertake maintenance and repair. The contractors are required to re-open State Highways as soon as possible after closure.

8.7.2 Operating in a state of local emergency

Following a declaration of a state of local emergency the Group Controller will, if necessary:

- a) Establish contact with Transit NZ Napier Office and ascertain the present status of each of the State Highways, the extent of any closures or restrictions and likely time for re-opening or clearance.
- b) Consult with Transit NZ and any affected Territorial Local Authorities and promote and co-ordinated the re-instatement of state highways based on Civil Defence recovery priorities as set out in the CDEM Group Plan section 8.1.
- c) Advise the Territorial Local Authorities, and subsequently keep them informed as to the status and operational capabilities of the State Highway network within Hawke's Bay until full reinstatement has been established.
- d) In consultation with Transit New Zealand keep the public informed of the status of individual state highways and as appropriate, through our public information programme, advise of restricted use and/or the need to avoid travel following partial or full reinstatement.

8.7.3 Priorities

The Group or Local Controller in consultation with Transit New Zealand, and Emergency Services Advisors will set priorities for the restoration of state highways. The priorities will take account of Transit's specific priorities and the response priorities listed in section 8.1 of the CDEM Group Plan.

8.7.4 Emergency Plans

Transit NZ has emergency plans for the reinstatement of State Highways after closure.

8.8 AIRPORTS and AIR TRAFFIC

There are four airports operating within Hawke's Bay. They are:

- a) Hawke's Bay (Napier) Airport operated by Hawke's Bay Airport Authority;
- b) Bridge Pa Airfield operated by the Hawke's Bay Aero Club;
- c) Waipukurau Airfield operated by the Central Hawke's Bay Aero Club;
- d) Wairoa Airfield operated by the Wairoa District Council.

Air Traffic Control services at Napier Airport are provided by Airways Corporation of New Zealand Limited.

The *National CD Plan* requires the Airways Corporation of New Zealand to:

- a) Co-ordinate the safe, orderly and expeditious flow of air traffic. Implement priorities and procedures in consultation with the appropriate CDEM organisation.
- b) Participate in the National Tsunami Warning System through the receipt and relay of warning signals from the Pacific Tsunami Warning Centre.
- c) Make available appropriate communication facilities and services to the extent practicable.
- d) Notify affected airspace users of any air space restrictions imposed by CAA as a result of coordination with the appropriate CDEM authority.

The Airways Corporation would use Ohakea Tower to provide a limited air traffic control service to the Hawke's Bay Region in the event that the Napier Tower is non-operational. (The HB tower staff control lower level air space within a radius of 10 nautical miles of Napier, and higher levels to varying distances.)

Limited air space above other airfields is controlled through pilot operating standards, which include a common radio frequency through which pilots keep other aircraft aware of their location and intentions.

A mobile control unit is available at Auckland and can be relocated to Hawke's Bay to manage heavy air traffic movements.

Military aircraft are able to use suitable airports and airfields notwithstanding that air traffic control facilities are not available.

8.8.1 Emergency Plans

The Airways Corporation have a *National Crisis Plan* for re-instatement of services.

The Hawke's Bay Airport Rescue Fire Service maintains a contingency plan to continue its functions during an emergency.

The Hawke's Bay Airport Authority is developing a contingency plan to reinstate the runway and facilities following a disaster.

As there are no formal plans for the reinstatement of facilities at any of the three airfields within the region the CDEM Group will encourage the airfield agencies to prepare and maintain contingency plans.

8.8.2 Operating in a state of local emergency

Following a declaration of a state of local emergency the Group Controller will, if necessary:

- a) Establish contact with the Airways Corporation Duty Controller to ascertain their operational capability. In the event that contact cannot be made then contact will be with the Duty Controller at Ohakea Tower.
- b) Establish and maintain liaison with, the airport and airfield agencies and the Airways Corporation Napier / Ohakea Tower, in order to obtain regular updates on status and operational matters until full reinstatement has been established.
- c) Promote and co-ordinate the reinstatement of the Hawke's Bay airport and airfields at Wairoa, Bridge Pa and Waipukurau (for regional relief purposes).
- d) Advise the Territorial Local Authorities, and subsequently keep them informed as to the status and operational capabilities of the airports and air traffic control arrangements until full reinstatement has been established.
- e) In consultation with the airport authorities, and airfreight and airlines, keep the public informed as to the operational status of the airport's facilities, priorities or alternative arrangements that may be necessary, until reinstatement has been established.

8.9 PORT OF NAPIER

The Port of Napier Ltd offers a full range of regular worldwide shipping services and, handles cargo moving to and from Hawke's Bay and throughout the central North Island.

8.9.1 Emergency Plans

The Port of Napier Limited maintains a plan for *Emergency Preparedness and Response*.

8.9.2 Operating in a state of local emergency

Following a declaration of a state of local emergency the Group Controller will, if necessary:

- a) Establish contact with the Marine Services Manager at the Port of Napier to ascertain the operational status, implications, re-instatement priorities and estimated times for repair of the Port.
- b) Promote and co-ordinate the reinstatement of the Port of Napier to the extent that ships can enter and berth.
- c) Disseminate information to the Territorial Local Authorities regarding the status of the Port of Napier and update as necessary until some service is available.
- d) In consultation with the Port of Napier Limited keep the public informed as to the status of Port facilities.

8.10 RAILWAYS

The Palmerston North to Gisborne rail line runs through Hawke's Bay. The *National CD Plan* requires Toll New Zealand Ltd to:

- a) Restore the Company's communications, rail and shipping services;
- b) Mobilise and co-ordinate at the national level of CDEM, and when requested, at regional or local level, Company resources available to assist CDEM operations;
- c) Make available for CDEM purposes at national level any communications capacity not essential to the primary Company objectives; and
- d) Provide representation, on request, at the NEOC.

8.10.1 National Contingency Plan

Toll New Zealand Limited has a national contingency plan for reinstatement of facilities following emergencies.

8.10.2 Operating in a state of local emergency

Following a declaration of a state of local emergency the group Controller will, if necessary:

- a) Establish contact with Toll New Zealand and ascertain the current status of the rail lines within Hawke's Bay, the extent of any closures or restrictions and likely time for re-opening or clearance.
- b) In consultation with Toll New Zealand and any affected Territorial Local Authority, consider re-opening railway lines based on Civil Defence priorities as set out in the CDEM Group Plan section 8.1.
- c) Advise the Territorial Local Authorities, and subsequently keep them informed as to the status and operational capabilities of the main railway line until full reinstatement has been established.
- d) In consultation with Toll New Zealand keep the public informed of the status of the railway until the line is operational.

8.10.3 Priorities

The Group or Local Controller in consultation with Toll New Zealand Limited, and Emergency Services Advisors will set priorities for the restoration of services. The priorities will take account of Toll New Zealand's specific priorities and the response priorities listed in section 8.1 of the CDEM Group Plan.