Emergency Response Plan

Version 1.3

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Glossary of abbreviations and terms

Act	Electricity Act 1992
AUFLS	Automatic under-frequency load shedding
Board	Electricity Commission Board
Developing Event	Event that evolves over time, e.g. as the result of a period of unseasonably low inflows to hydro catchments
Immediate Event	Event that occurs with little or no warning, e.g. as a result of a transmission or major power station failure
Commission	Electricity Commission
Emergency Storage Guideline	Storage reference curve that corresponds to a 10% risk of electricity shortages – if storage falls below this the Commission will initiate a series of emergency measures that are set out in the ERP
ERP	Emergency Response Plan, published by the Commission
GPS	Government Policy Statement, published May 2008
Hydro Risk Curves	Storage reference curves prepared by the Commission that reflect the risk of future electricity shortages, taking into account the range of likely inflows to hydro catchments
Interim ERP	The Interim Emergency Response Plan published by the Commission in April 2005
Minister	Minister of Energy and Resources
POPs	Participant Outage Plans, to be published by scheduled participants under the Electricity Governance (Security of Supply) Amendment Regulations 2009[1]
PPOs	The System Operator's Primary Performance Obligations
Regulations	Electricity Governance Regulations 2003
Rules	Electricity Governance Rules 2003
Security Alert	Declaration by the Commission that a Security Alert Phase has commenced
Security Alert Phase	Phase in which the risk of shortage is deemed to be between 4% and 10%
Security Emergency	Declaration by the Commission that a Security Emergency Phase has commenced

[1] http://www.legislation.govt.nz/regulation/public/2009/0040/latest/contents.html

Security Emergency Phase	Phase in which the risk of shortage is deemed to be at least 10%
Security Normal Phase	Phase in which the risk of immediate shortage is deemed to be small
Security Watch	Declaration by the Commission that a Security Watch Phase has commenced
Security Watch Phase	Phase in which the risk of shortage is deemed to be between 1% and 4%
Security of Supply Policy	The policy published by the Commission setting out how it intends meeting the Act requirements and GPS expectations for security of supply

Contents

1. Introduction

1.1.1 The Commission seeks to ensure that electricity is produced and delivered in a reliable manner and that risks relating to security of supply are properly and efficiently managed.

1.1.2 The obligations of the Commission are set out in the Act and associated GPS. The Act and GPS in combination establish a responsibility for the Commission to manage the security of supply of electricity, and provide some guidance about how the Government expects the Commission to go about the task.

1.1.3 These obligations have implications for emergency response planning. In particular, the Commission is required to:

(a) Use reasonable endeavours to ensure security of supply while minimising distortions to the normal operation of the market;

(b) Manage emergency conservation campaigns to lower the risk of supply shortages;

(c) Have an Emergency Storage Guideline to trigger a range of emergency measures, including an emergency conservation campaign;

(d) Establish an Emergency Response Plan that includes a range of measures to cover severe contingencies; and

(e) Put in place arrangements to implement rolling outages during extreme events that would otherwise require blackouts.

1.1.4 This Emergency Response Plan (ERP) replaces the Interim ERP published in 2005. As well as meeting the obligations contained in the Act and GPS, this ERP is intended to provide guidance about how the Commission intends to respond in the build up to, and during, potential emergency security situations.

1.1.5 Accordingly, it defines several phases covering different levels of security risk and outlines the steps that the Commission will take during each phase. The ERP is not actually limited to covering emergency situations.

1.1.6 Experience over winter 2008 and observations published in the Winter Review[2] suggested that existing arrangements for emergency planning did not provide sufficient clarity about the Commission's intentions during a security emergency. This revised ERP is intended to address the deficiencies identified in the Winter Review.

1.1.7 The Commission is continuing to work on various security of supply issues, including market design features and possible emergency measures. The ERP will therefore evolve over time, as this work progresses.

[2] http://www.electricitycommission.govt.nz/consultation/winter08

2. Security of Supply Policy

2.1 Approach

2.1.1 The Commission published a revised Security of Supply Policy in September 2008.[3] The key points in the context of emergency planning are that the Commission will:

(a) Focus on ensuring quality analysis and information is provided as its primary mechanism for managing security of supply risks;

(b) Monitor and publish forecasts of security of supply in the long-term;

(c) Procure Reserve Energy and/or Reserve Capacity if forecasts of security margins fall below prescribed levels;

(d) Monitor hydro storage relative to Hydro Risk Curves in order to assess short-term security of supply risks;

(e) Dispatch Reserve Energy if market prices rise higher than price triggers or if hydro storage falls below particular guidelines; and

(f) Initiate a series of emergency measures if hydro storage falls below an Emergency Storage Guideline corresponding to a 10% risk of future blackouts.

2.2 Monitoring Hydro Storage

2.2.1 The Commission monitors security of supply on an ongoing basis and publishes regular updates of hydro storage relative to Hydro Risk Curves indicating the risk of possible future shortages of supply. This provides market participants with an opportunity to consider the Commission's analysis and respond to security of supply risks as they arise.

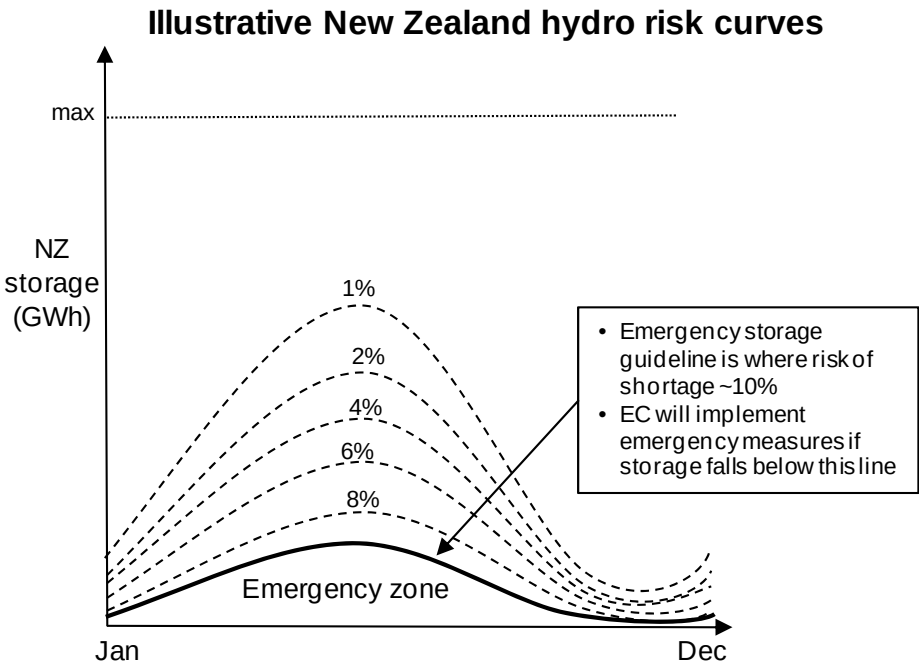
2.2.2 The Hydro Risk Curves reflect the risk of future electricity shortages taking into account the range of likely inflows to hydro catchments, and are updated whenever something happens that is likely to cause a material change to the curves.

2.2.3 The published Hydro Risk Curves indicate 1%, 2%, 4%, 6%, 8% and 10% risk of electricity shortages taking into account the range of likely inflows to hydro

[3] http://www.electricitycommission.govt.nz/pdfs/opdev/secsupply/policy/sos-policyOct08.pdf

catchments[4]. The Commission also publishes an Emergency Storage Guideline, which is the 10% Hydro Risk Curve.

2.2.4 The Risk Curves take the form illustrated in the following chart.



2.2.5 The Hydro Risk Curves and Emergency Storage Guidelines are published separately for New Zealand and the South Island. The current versions are provided on the Commission website.[5]

2.2.6 The Commission has a Dispatch Policy for each Reserve Energy and Reserve Capacity option, which is intended to provide a clear indication to market participants as to how these options will be used. These dispatch policies may refer to the level of storage relative to the Hydro Risk Curves. For instance, the Commission's current Dispatch Policy for Whirinaki Power Station specifies that Whirinaki is expected to operate if storage falls below the 4% Risk Curve, and that in this event the Commission will consider reducing Whirinaki's offer price to ensure it is dispatched.

2.2.7 The Security of Supply Policy specifies that, if storage falls below the Emergency Storage Guideline, the Commission will initiate a series of emergency measures that are set out in the ERP.

[4] The risk of shortage is assessed by simulating expected supply and expected demand, while assuming that all available thermal plant will be running, and determining the probability that hydro storage will fall to zero, in the absence of any emergency measures implemented by the Commission

[5] See links marked 'Hydro Risk Curve and actual storage' at http://www.electricitycommission.govt.nz/opdev/secsupply/

2.3 The Role of Participants

2.3.1 The Commission's approach to security of supply places an emphasis on providing good quality information on security risks and maximising the opportunity for participants to respond to, and manage their exposure to, security of supply risks.

2.3.2 Consistent with this approach, the Commission expects participants to manage security of supply risks if storage falls and the risk of future shortages rises. If storage approaches and passes through the Emergency Storage Guideline, the Commission expects participants to implement measures designed to avert shortages of supply..

2.3.3 In general, the Commission considers that most types of measures to manage security of supply are best implemented by participants. Further, in a well-designed market, participants should face appropriate incentives to support security of supply. Accordingly, this ERP limits the role of the Commission during a shortage situation to:

(a) providing information;

(b) following its own Dispatch Policies for Reserve Energy and Reserve Capacity options; and

(c) acting as a 'backstop', implementing last resort measures only when other options have failed, or when participants have had the opportunity to implement the measures but have not done so.

3. Scope of Emergency Response Plan

3.1 Emergency Events

3.1.1 This Emergency Response Plan is intended to provide clear guidance to stakeholders about steps the Commission will take and the circumstances that will need to exist for the Commission to take those steps, and to provide for a series of last resort emergency measures, which would not be implemented unless there was a significant risk that it would not be possible to meet the demand for electricity on a sustained basis.

3.1.2 The types of event that are likely to require the implementation of the ERP include an extended period of extremely low inflows to hydro catchments, a major asset outage that was expected to be sustained for a long period, or some combination of these events.

3.1.3 The ERP is not intended as a tool for managing short-term grid emergencies or civil defence emergencies.

3.2 Grid Emergencies

3.2.1 Grid emergencies are managed pursuant to Schedule C3 Technical Code B of part C of the Rules. In simplified terms, a grid emergency occurs when the System Operator's ability to comply with its principal performance obligations (PPOs) is compromised, and urgent action is required of the system operator and/or participants to alleviate the situation. The PPOs include an obligation to avoid cascade failure and to maintain frequency quality.

3.2.2 The Rules provide for the system operator to issue a grid emergency notice to relevant participants whenever the PPOs are compromised or whenever there is a risk they will be compromised. The notice must specify the trading periods to which it applies.

3.2.3 In the event of a grid emergency (e.g. insufficient generation and frequency regulating reserve, or insufficient transmission capacity), the system operator can request a generator to vary its offer, request a retailer or a distributor to reduce demand, require the disconnection of demand, and/or take any other reasonable action to alleviate the grid emergency. Each distributor is also required to maintain an automatic under-frequency load shedding (AUFLS) system to enable automatic disconnection of two blocks of demand when the frequency falls to predefined levels.

3.2.4 These grid emergency provisions are intended to cover short-term emergency situations that typically occur as a result of system contingencies such as a loss of a transmission line or a major source of generation.

3.2.5 This ERP does not cover grid emergency situations, although it is possible, as described in section 3.2, that the ERP could be activated following a grid emergency if necessary.

3.3 Civil defence emergencies

3.3.1 Lifeline utilities (including lines companies and generators) have direct responsibility under section 60 of the Civil Defence Emergency Management Act 2002 to ensure that they are able to function to the fullest possible extent, even though this may be at a reduced level, during and after a civil defence emergency.

3.3.2 Civil defence emergencies could have impacts on both supply and demand. In the event that a civil defence emergency impacts within cities and towns it is likely that demand for electricity will fall and the focus will be on restoring supply to critical consumers, rather than managing limited supply using the emergency measures included in the ERP. Most civil defence emergencies are likely to be of this nature.

3.3.3 In the event that a civil defence emergency impacts on power stations and there is insufficient supply to meet consumer demand, the emergency measures included in the ERP could potentially play a useful role.

3.3.4 To the extent that a natural disaster produces circumstances covered by the ERP, the Commission intends to act in accordance with the ERP.

3.4 Reserve Energy / Capacity Dispatch Policies

3.4.1 The ERP does not contain the Commission's Dispatch Policies for its Reserve Energy and Reserve Capacity options. These are specified separately.

4. Emergency Events

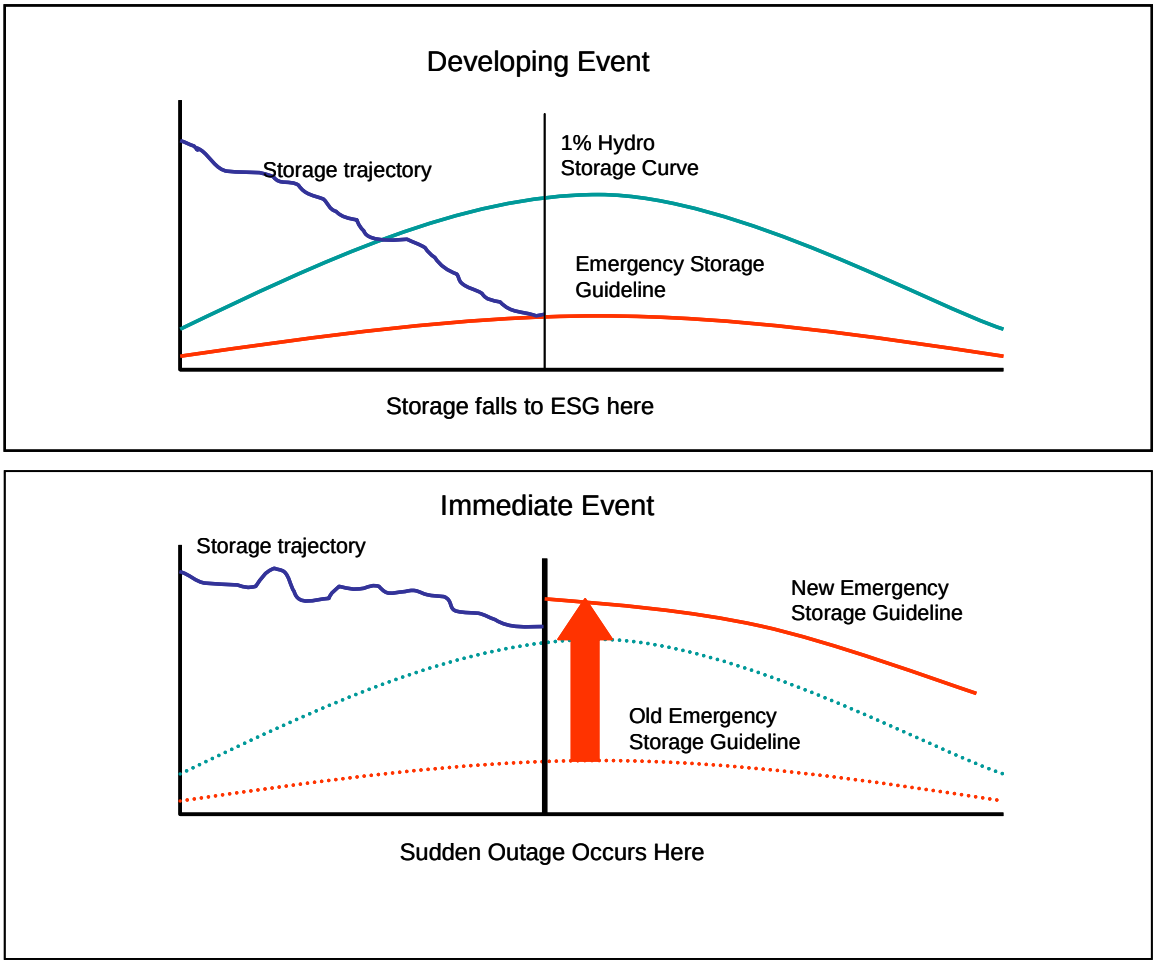
4.1 Types of Event

4.1.1 There is a spectrum of events that could lead the Commission to determine that emergency measures are required. Two categories of events that typify the ends of the spectrum are:

Developing Events – Events that evolve over time – for example as the result of a period of unseasonably low inflows to hydro catchments; and

Immediate Events – Events that occur with little or no warning for example as a result of a transmission or major power station failure.

4.1.2 These types of event are illustrated in the following figure, which contrasts the two categories of event and the likely sequence of prices and storage.



4.1.3 The ERP needs to contemplate the sequence of emergency measures that might be appropriate for both categories of events. It is also important to recognise that,

in practice, a security of supply emergency could have elements of both types of events.

4.2 Developing Events

4.2.1 The first example illustrated in the table is for a Developing Event that involves low inflows to hydro catchments resulting in storage falling through the hydro risk curves and ultimately below the Emergency Storage Guideline.

4.2.2 This illustrates how a dry-year emergency would take some time to unfold, with opportunities to manage security risks and prepare emergency measures during the early part of the event.

4.3 Immediate Events

4.3.1 The second example illustrates an Immediate Event, such as a major gas supply failure. If such a failure impacted upon multiple generating sites it could require immediate action in order to balance supply and demand.

4.3.2 In practice the system operator has responsibility for real-time coordination and would likely implement load-shedding under the Grid Emergency provisions of part C of the Rules. If the outage was expected to be of significant duration, then the Commission may need to implement rolling outages under the Electricity Governance (Security of Supply) Regulations 2008[6] in order to achieve targeted savings in an endeavour to reduce the impact upon the economy.

4.3.3 Following an Immediate Event, the Commission will promptly re-evaluate the Hydro risk curves and the Emergency Storage Guideline. In some circumstances this may indicate that the Emergency Storage Guideline rises to a position above the level of hydro storage, suggesting that emergency measures should be implemented (as illustrated in the figure above).

4.3.4 If this is the case, emergency measures will need to be implemented as soon as possible after the System Operator has restored the balance between supply and demand. Unlike a Developing Event, little time will be available to prepare and implement emergency measures. Only those measures that are almost immediately available will be called, at least in the first instance.

[6] http://www.legislation.govt.nz/regulation/public/2008/0252/latest/DLM1403501.html

5. Emergency Response Structure

5.1 Organisational Structure

5.1.1 The organisational structure that will apply during a security of supply situation consists of:

(a) an Operational Steering Group, consisting of the Commission Chair, General Manager, Security of Supply staff, and others as required (Communications staff, Finance staff, Directors); and

(b) a Project Manager, who will be appointed by the General Manager.

5.1.2 The Operational Steering Group will have overall responsibility for the Commission's emergency response strategy. It will:

(a) determine when a new Security Phase has been entered (see section 6.2);

(b) assess security risks;

(c) liaise with industry representative groups; and

(d) approve implementation of emergency measures.

5.1.3 The Project Manager will:

(a) gather relevant information and report to the Operational Steering Group on security risks;

(b) develop emergency measures and recommend them to the Operational Steering Group;

(c) implement emergency measures and assess their effectiveness;

(d) coordinate with industry participants on a day-to-day basis; and

(e) ensure that the public is being kept informed through the Commission's website, and that public questions are being answered (to the extent possible).

5.1.4 If the Project Manager expects to be unavailable for a period of more than a week for any reason, he or she will advise the General Manager, appoint an Acting Project Manager, and provide the Acting Project Manager with any information and resources necessary to carry out their responsibilities under the ERP.

5.2 Communications

5.2.1 The Chair will take responsibility for national media communications and briefings to stakeholders on behalf of the Commission.

5.2.2 The Operational Steering Group will be responsible for deciding when to declare (and revoke) a Security Watch, Security Alert or a Security Emergency (see section 6). These declarations (and revocations) will be issued by the Chair, made available on the Commission’s website, and notified in the Commission Update.

5.2.3 The Operational Steering Group will liaise with representative industry participant groups to coordinate communications and emergency planning. Operational Steering Group members will periodically meet with the full memberships of these industry groups, to ensure that all members' views are heard.

5.2.4 The Project Manager will ensure that the Commission's website provides public information on the security situation, and that questions from the public are answered (to the extent possible).

5.2.5 If the Commission makes arrangements to carry out an emergency conservation campaign, then a communications plan will be developed as part of the process.

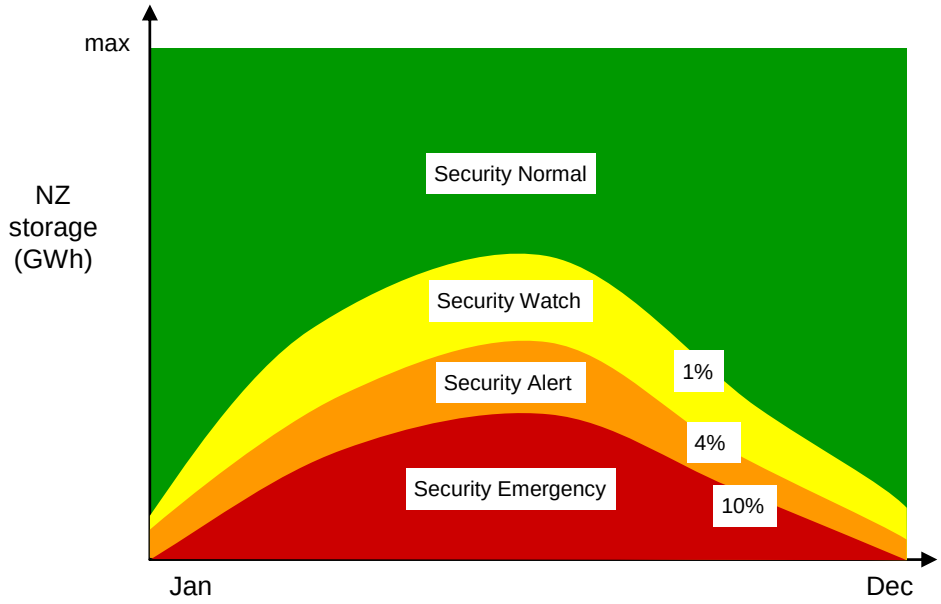
6. Staged Approach to Security of Supply

6.1 Security Phases

6.1.1 The Commission considers that it is helpful to consider security of supply planning in terms of *Security Normal*, *Security Watch*, *Security Alert*, and *Security Emergency* phases. The table below indicates the roles of the Commission and participants implied by the Commission's approach to security of supply.

Phase	Role of Commission	Role of Participants
Security Normal	Monitor and publish assessments of security risk	Operate normally in the market
Security Watch	Monitor more closely, and publish assessments of security risk more frequently Communicate security risks	Operate normally in the market Monitor and manage security risks on a commercial basis Coordinate with other participants as appropriate Communicate with stakeholders
Security Alert	Monitor more closely and publish assessments of security risk more frequently Prepare for possible emergency measures Communicate security risks and possible emergency measures	Operate normally in the market Monitor and manage security risks on a commercial basis Prepare for possible emergency responses and implement as appropriate Coordinate with other participants as appropriate Communicate with stakeholders
Security Emergency	Declare a security emergency Communicate security risks and the sequence of emergency measures that will be taken Initiate emergency measures as necessary	Monitor and manage security risks on a commercial basis Implement and participate in emergency responses as appropriate Coordinate with other participants as appropriate Communicate with stakeholders

6.1.2 These security phases and the transitions are illustrated in the following figure (from a 'Developing Event' perspective):



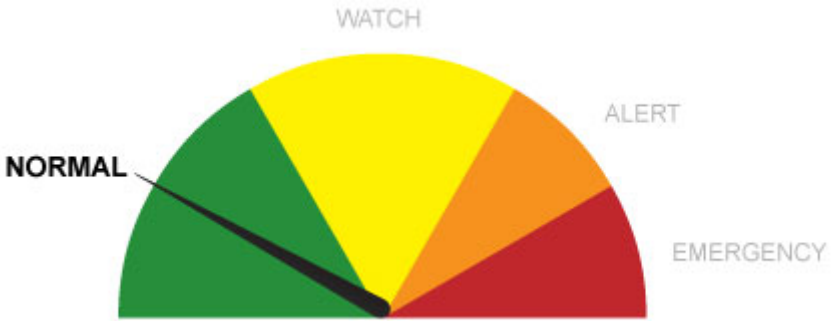
6.2 Phase triggers

6.2.1 The transitions between phases will be as follows.

Trigger	Transition
When hydro storage falls below the 1% Hydro Risk Curve; or When an Immediate Event has occurred which, in the Commission's view, gives rise to a 1% risk of shortage	**Security Normal to Security Watch**
When hydro storage falls below the 4% Hydro Risk Curve; or When an Immediate Event has occurred which, in the Commission's view, gives rise to a 4% risk of shortage	**Security Watch to Security Alert**
When hydro storage falls below the Emergency Storage Guideline (10% Hydro Risk Curve); or When an Immediate Event has occurred which, in the Commission's view, gives rise to a 10% risk of shortage	**Security Alert to Security Emergency**[7]
When hydro storage rises above the Emergency Storage Guideline (10% Hydro Risk Curve); or When the Immediate Event that has occurred is mitigated so that the risk of shortage is less than 10%	**Security Emergency to Security Alert**
When hydro storage rises above the 4% Hydro Risk Curve; or When the Immediate Event hat has occurred is mitigated so that the risk of shortage is less than 4%	**Security Alert to Security Watch**
When hydro storage rises above the 1% Hydro Risk Curve; or When the Immediate Event that has occurred is mitigated so that the risk of shortage is less than 1%	**Security Watch to Security Normal**

[7] It is possible that, during an Immediate event, the transition could be from Security Normal direct to Security Emergency.

6.2.2 The Commission's website now includes a modified version of the Riskmeter which indicates the current security situation expressed as Security Normal, Security Watch, Security Alert, or Security Emergency. The Riskmeter appears as in the following figure:



6.2.3 The Security Watch, Security Alert and Security Emergency phases could be triggered based on the risk of shortages in specific regions, even when the risk was low elsewhere. For example, at times the risk of energy shortages might be limited to the South Island, as a result of constraints on the inter-island HVDC transmission link.

6.3 Security Normal

6.3.1 During Security Normal, the Commission's focus will be on assessing the risks of shortage and publishing information. Regular security assessments will be published as outlined in the Security of Supply Policy.

6.3.2 If an Immediate Event (little or no warning) occurs, the Commission will re-evaluate the Hydro Risk Curves and determine whether the event has caused a transition to a Security Watch, Security Alert or Security Emergency phase. It could also be expected that immediate demand reductions would be coordinated by the System Operator in accordance with the grid emergency provisions in Part C of the Rules.

6.4 Security Watch

6.4.1 The Operational Steering Group will convene and determine that the Riskmeter should be moved from Security Normal to Security Watch.

6.4.2 During the Security Watch phase, the Commission will monitor security risks more closely and communicate the slightly elevated level of risk to stakeholders.

It anticipates that, during this phase, industry participants will act to manage risks in a sensible commercial manner.

6.4.3 Any public messages will be low key and focus on the slight elevation of security risks and the need for prudent measures to conserve energy without sacrificing productivity and comfort levels.

6.4.4 Note that the derivation of the Hydro Risk Curves and calculation of shortage risk assumes that generation will operate in such a way as to conserve hydro storage in at-risk areas whenever storage falls below the 1% Hydro Risk Curve.

6.4.5 The Commission will monitor whether generation is operating in a way that is consistent with this assumption. If this is not happening, the Commission will investigate and seek to determine why not.

6.5 Security Alert

6.5.1 The Operational Steering Group will convene and confirm that the Riskmeter should be moved from Security Watch to Security Alert.

6.5.2 During a Security Alert phase, the Commission will more frequently update and publish assessments of security risk. It anticipates that, during this phase, industry participants will act to prepare and implement emergency measures in order to manage the future risk of shortages. The Commission would expect industry participants to put in place a public conservation campaign at some point during a Security Alert.

6.5.3 The Operational Steering Group will assess the need to prepare for additional emergency measures as set out in this ERP, and will direct the Project Manager accordingly.

6.5.4 The Commission will establish liaison with any industry representative group(s) established to coordinate the industry response (if this has not already been done).

6.5.5 The Chair will communicate the level of security risks and the possible emergency measures that could be taken.

6.5.6 If generation is not being offered in such a way as to conserve hydro storage in at-risk areas, the Commission will consider offering the Whirinaki reserve generation at a price below RETP.[8]

[8] The Commission will only consider this action if it is satisfied that the operation of Whirinaki will not displace market-based thermal generation.

6.6 Security Emergency

6.6.1 The Operational Steering Group will determine that a Security Emergency should be declared by the Chair. The Chair will communicate the level of security risks and the sequence of emergency measures that can be expected.

6.6.2 During a Security Emergency phase, the Operational Steering Group will actively oversee the implementation of emergency measures in accordance with this ERP. The Project Manager will be tasked with implementing any emergency measures.

6.6.3 Frequent assessments of security of supply risks can be expected and very close liaison on a day-to-day basis between the Project Manager, the System Operator, and other industry participants can be expected.

7. Emergency Measures

7.1 Introduction

7.1.1 This ERP includes a limited range of emergency measures that will be implemented by the Commission during a security of supply emergency, consistent with the overall approach of encouraging industry participants to manage security risks and implement emergency measures.

7.1.2 The role of the Commission is to implement emergency measures only if it considers that industry participants will fail to implement emergency measures sufficient to avoid possible energy shortages.

7.1.3 This plan includes the emergency measures outlined in the following table:

Emergency Measure	Preparation of Emergency Measure to be triggered	Emergency Measure to be triggered
Public Conservation Campaign	If industry participants are not in the process of preparing a campaign and and a Security Alert is declared; or, If industry participants have not implemented a campaign and the Commission considers that it is more likely than not that a Security Emergency will occur.	When a Security Emergency is declared, if industry participants have not yet implemented a campaign.
Contracted Demand Response	A tender for short-term contracted demand response will be initiated when a Security Alert is declared.[9]	Individual demand response contracts will be triggered in accordance with the Dispatch Policy established for each demand response contract. It is unlikely that any contracts would be triggered before a Security Emergency was declared.

[9] The Commission will follow a pre-defined and published process for securing demand response contracts using a standard template agreement as a starting point. This process and template are currently under development.

Emergency Measure	Preparation of Emergency Measure to be triggered	Emergency Measure to be triggered
Rolling Outages	The Commission will provide 'specified participants' with at least two weeks notice that Rolling Outages may be required (if possible). If the need for rolling outages is triggered by an Immediate Event, the Commission will provide as much notice as possible, consistent with the need to put measures in place.	If hydro storage falls to or below a level at which, in the Commission's view, it is more likely than not that shortages will occur; or When an Immediate Event has occurred which, in the Commission's view, creates a situation such that it is more likely than not that shortages will occur.

7.2 Emergency Conservation Campaign

7.2.1 A conservation campaign involves encouraging voluntary reductions in demand through public communications. The GPS conveys an expectation that the Commission will use a conservation campaign as a means to manage emergencies, if storage falls below the Emergency Storage Guideline.

7.2.2 In practice, conservation campaigns have typically been initiated through a collective approach organised and funded by industry participants, and implemented before storage falls below the Emergency Storage Guideline.

7.2.3 The Commission considers that it is appropriate for industry participants to organise and fund a public energy conservation campaign, and that it is prudent for such a campaign to be initiated during a Security Alert (if not earlier).

7.2.4 The Commission will therefore commence preparations for an emergency conservation campaign:

(a) If a Security Alert has been declared and if industry participants are not in the process of preparing a campaign; or

(b) If it considers that it is more likely than not that a Security Emergency will occur, and if industry participants have not successfully implemented a campaign.

7.2.5 If a Security Emergency occurs and participants have not successfully implemented an emergency conservation campaign, then the Commission will:

(a) implement its campaign, if it has prepared one; or

(b) collaborate with industry to prepare and implement a campaign as quickly as possible, if it has not. (This would be most likely to happen if the Security Emergency was the result of an Immediate Event.)

7.3 Contracted Demand Response

7.3.1 Contracting for demand reductions is an option available to the Commission as part of the Reserve Energy arrangements. As outlined in the Security of Supply Policy, the Commission will assess, on an annual basis, whether Winter Energy Margins or Winter Capacity Margins are adequate to cover the following 2-5 years. If margins are insufficient, the Commission will consider contracting for Reserve Energy. This could take the form of Reserve Generation or Reserve Demand (demand reduction contracts).

7.3.2 Contracting for demand reductions is also an option available to the Commission as a short-term measure for managing security of supply emergencies.

7.3.3 The Commission considers that it is not the best-placed party to procure demand-side resources during a security emergency. Nonetheless, this ERP includes contracted demand response as an emergency measure. This is because of concerns that participants may not choose to incur the costs of contracting for demand-side emergency resources.

7.3.4 The Commission intends to prepare a template agreement for short-term demand response contracts and define the process by which demand resources will be procured. This preparation should allow the Commission to promptly procure demand-side contracts in a security emergency, should participants not do so.

7.3.5 The template agreement and procurement process will be published on the Commission's website as an addendum to this ERP when they have been developed.

7.3.6 In order for demand-side contracts to be in place when required, the Commission will need to trigger the procurement and negotiation process some time in advance of the emergency measures being required. This plan provides for the Commission to initiate the procurement process when a Security Alert has been declared. This should allow some time for demand response contracts to be put in place before any Security Emergency is declared. The Commission will only initiate the procurement process if it considers that industry participants have failed to put in place sufficient arrangements.

7.3.7 The point at which each specific demand-side reduction contract is triggered will depend on its cost. Each demand-side contract will specify a trigger, which will be published by the Commission in the form of a Dispatch Policy. Collectively, the demand-side contracts will form a "merit order", with lower-cost options triggered

first. It is unlikely that these emergency demand response contracts would be triggered before a Security Emergency had been declared.

7.4 Rolling Outages

7.4.1 Rolling outages involve the Commission instructing distributors and selected direct connect consumers to cut load to meet savings targets. The Electricity Governance (Security of Supply) Regulations 2008 empower the Commission to make a Supply Shortage Declaration and direct rolling outages in a planned manner so as to avoid unplanned outages.

7.4.2 Rolling outages are intended as the very last resort emergency measure and will only be implemented in circumstances where the Commission considers that other measures have failed.

7.4.3 As part of the arrangements, the Commission has prepared a Security of Supply Outage Plan (SOSOP) outlining how it intends to implement rolling outages, and designating participants (intended to be distributors and direct connected consumers) who are required to prepare plans to implement rolling outages within particular regions. The Commission has published the SOSOP at the same time as this ERP and expects to begin interacting with designated participants to move towards development and publication of Participant Outage Plans (POPs).

7.4.4 The Commission will call for designated participants to implement rolling outages as the last resort emergency measure, during a Security Emergency, when it considers that the risk of shortages has risen to the point whereby it is “more likely than not” that the System Operator would otherwise need to instruct load-shedding under the grid emergency provisions of Part C of the Rules.