

# Notices for insufficient generation

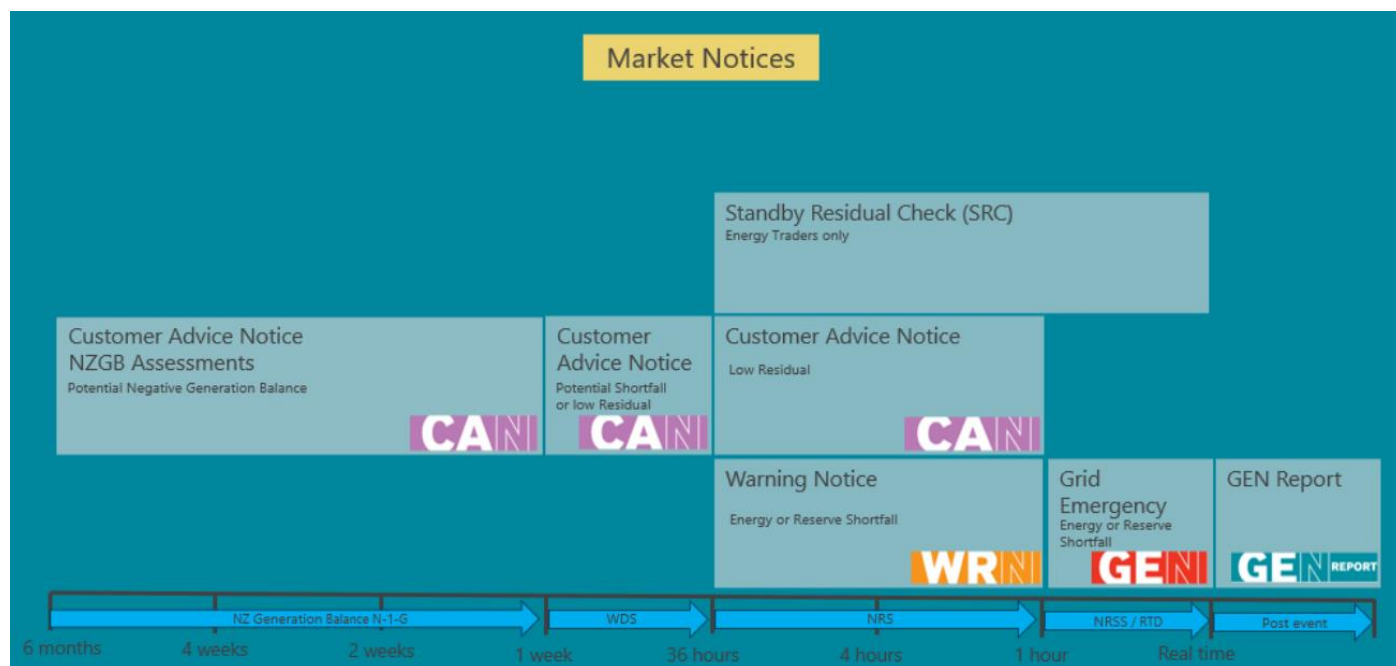
Timeline, overview of notices and sample notices

## The notification timeline

As System Operator we monitor available energy capacity and potential peak demands from around six months ahead until we reach the week ahead when we monitor the market schedules. The market schedules have more accurate demand forecasts and reflect offers in the market.

We have a series of information and notifications we provide during this time.

### Timeline of information provided by the system operator



### Notices and advice from six months to one week ahead

From six months to one week ahead of real time the system operator is assessing the supply-demand balance in the [New Zealand Generation Balance](#) (NZGB). The generation balance is available daily online, with a monthly report to the NZGB website. If shortfalls are observed we tell participants through a Customer Advice Notice (CAN).

### Notices and advice one-week to real time


In the one-week ahead timeframe forecast, market schedules are published to the Wholesale Information Trading System (WITS).

If a shortfall (aka reserve deficit or energy deficit) is showing in the forecast schedules or is close to showing, the system operator will issue various notices to the market informing of the risk. These notices advise participants of the issue, the actions requested from participants, and the actions the system operator will take if an issue is not resolved. An overview of each notice is outlined below.

Note, there are also notices provided to market participants through WITS, these are not covered here.

## Overview of our notices in the one week to real-time timeframe

Notice and timing	Trigger and purpose	Requests made to:
 <p><b>Customer Advice Notice (CAN)</b></p> <p><b>Potential shortfall or low residual situation</b> 1 week to 36 hours out</p>	<p><b>Trigger:</b> week ahead schedule (WDS) shows an energy or reserve shortfall or less than 200 MW of <i>residual</i> remaining for given times.</p> <p><b>Purpose:</b></p> <ul style="list-style-type: none"> <li>to warn that a tight point is coming up in the one week to 36 hour timeframe</li> <li>request action from participants.</li> </ul>	<p><b>Market participants</b> to ensure their offers are accurate and to make additional capacity available.</p> <p><b>Grid Owner</b> increase transmission offers where generation may be constrained.</p>
 <p><b>Customer Advice Notice (CAN)</b></p> <p><b>Low residual</b> 36 hours to 1 hour out</p>	<p><b>Trigger:</b> market schedules (NRS) shows less than 200 MW of <i>residual</i> remaining for given times.</p> <p><b>Purpose:</b></p> <ul style="list-style-type: none"> <li>to warn that a tight point is coming up in the 36 hour to one hour timeframe and</li> <li>request action or preparations from participants.</li> </ul>	<p><b>Market participants</b> to reoffer to provide more generation.</p> <p><b>Grid Owner</b> increase transmission offers where generation may be constrained.</p> <p><b>Distributors</b> to submit difference bids for the identified time and prepare to manage load during those times.</p> <p><b>Direct connects and retailers</b> to be aware and prepare for potential impacts or requests.</p>
 <p><b>Warning Notice (WRN)</b></p> <p><b>Energy or reserve shortfall</b> 36 hours to 1 hour out</p>	<p><b>Trigger:</b> a forecast <i>deficit</i> at given times.</p> <p><b>Purpose:</b></p> <ul style="list-style-type: none"> <li><i>request</i> participants to take action at the times given, and</li> <li>to warn participants of potential consequences if the issue is not alleviated</li> </ul>	<p><b>Market participants</b> to reoffer to provide more generation.</p> <p><b>Grid Owner</b> increase transmission offers where generation may be constrained.</p> <p><b>Distributors</b> to submit difference bids for the identified time and prepare to manage load during those times.</p> <p><b>Direct connects</b> to prepare to reduce load at the times given.</p> <p><b>Retailers:</b> take notice of potential consequences as customers may be affected by a requirement to shed load.</p>
 <p><b>Grid Emergency Notice (GEN):</b></p> <p>After gate closure (1 hour to real time)</p>	<p><b>Trigger:</b> either a forecast <i>deficit</i> or a real-time <i>deficit</i> is seen <i>after gate closure</i>.</p> <p><b>Purpose:</b></p> <ul style="list-style-type: none"> <li>to allow market participants to reoffer, and</li> </ul>	<p><b>Market participants</b> to reoffer to provide more generation.</p> <p><b>Grid Owner</b> instructed to return assets to service that may increase available generation, or to reconfigure the grid.</p>

<p><b>Gate closure means the two half-hourly trading periods preceding the trading period (hence 1 hour to real-time.)</b></p>	<ul style="list-style-type: none"> <li>• to request participants respond to actions in the GEN, and</li> <li>• to warn of the consequences of if the requirements are not met.</li> </ul>	<p><b>Distributors and direct connects</b> requested to reduce load at the times given, and take notice that if the requirements are not met, customers may face disconnection.</p> <p><b>Retailers:</b> take notice of potential consequences as customers may be affected by a requirement to shed load.</p>
 <p><b>Grid Emergency Report (GEN Report)</b></p> <p>At end of event.</p>	<p><b>Trigger:</b> end of the Grid Emergency event.</p> <p><b>Purpose:</b> advise participants the Grid Emergency has ended, and of the actions the system operator has taken.</p>	<p>No requests</p>

Note: there are additional notices (Standby Residual Checks, and Island Shortage Situation notices) provided by the system operator to market participants. These are not covered here.



## Customer Advice Notice

**To:** CAN NZ Participants  
**Sent:**  
**Ref:** 4819861624

**From:** The System Operator  
**Telephone:** 0800 488 500  
**Email:** NMData@transpower.co.nz

**Revision of:**

Potential Short Fall or Low Residual Situation

**Affected dates and times:**

**24 May 2023, 17:00 - 19:00**

The System Operator advises that a National energy shortfall or low residual generation has been identified in the week ahead schedule (WDS) for the above times.

For affected times, participants are requested to:

- Ensure energy, wind generation, reserve offers, and load bids are accurate.
- Increase energy and reserve offers.
- Increase transmission offers where generation may be constrained.

**Process and further requests, if the situation is not resolved or worsens:**

This CAN gives you early notice of a pending situation. If insufficient generation and reserve offers appear in the NRS schedules (36 hours ahead of real-time) we will send:

- A Low Residual Customer Advice Notice (CAN) if **national** residual generation is less than 200 MW. The CAN will make further requests to participants to help resolve the situation. This could happen up to gate closure (36 hours to 1 hour ahead of real-time).
- A Warning notice (WRN) if an energy or reserve shortfall is identified or likely. The WRN will make further requests to participants to help resolve the situation. This could happen up to gate closure (36 hours to 1 hour ahead of real-time).
- A Grid Emergency Notice (GEN) if an energy or reserve shortfall is identified or likely within one hour of real-time. This will make further requests to grid-connected consumers and distributors to take action to alleviate the situation.

For more information, or if you are aware of information that could impact system security, please advise the Security Coordinator on 0800 488 500.

Up to date island residual information is available on the [WITS website](#).

For further information on procedures for low residuals or subsequent insufficient energy and reserves, see this link [here](#).

Media enquiries call 021 195 8613 (please do not text).

A revision of this notice will be issued if there is any change to the situation above.



TRANSPOWER



## Customer Advice Notice

**To:** CAN NZ Participants  
**Sent:**  
**Ref:** 4782019844

**From:** The System Operator  
**Telephone:** 0800 488 500  
**Email:** NMData@transpower.co.nz

### Revision of:

Low Residual Situation

### Affected dates and times:

**24 May 2023 17:00 - 19:00**

The System Operator advises that **National** residual generation is less than 200 MW for the above times.

For affected times, participants are requested to:

- Ensure energy, wind generation, reserve offers, and load bids are accurate.
- Increase energy and reserve offers.
- Submit difference bids for discretionary demand (for the identified time plus 1 hour either side).
- Increase transmission offers where generation may be constrained.

### Process and further requests, if situation worsens:

This CAN gives you early notice that if the situation worsens we may have insufficient generation to meet demand and cover reserves for a contingent event. If insufficient generation and reserve offers appear in the schedules, we will send:

- A Warning notice (WRN) which will make further requests to participants to help resolve the situation. This could happen up to gate closure (7 days to 1 hour ahead of real-time).
- A Grid Emergency Notice (GEN) within one hour of real-time which will make further requests to grid-connected consumers and distributors to take action to alleviate the situation.

For more information, or if you are aware of information that could impact system security, please advise the Security Coordinator on 0800 488 500.

For further information on procedures for low residuals or subsequent insufficient energy and reserves see this link <https://www.transpower.co.nz/system-operator/operational-information>

Media enquiries, call 021 195 8613 (please do not text)

A revision of this notice will be issued if there is any change to the situation above.

Transpower New Zealand Ltd The National Grid



## Warning Notice

**To:** WRN NZ Participants

**Sent:**

**Ref:** 4159340903

**From:** The System Operator

**Telephone:** 0800 488 500

**Email:** NMData@transpower.co.nz

**Revision of:**

**Cause:** Insufficient Generation offers to meet demand North Island

**Region or GXP affected:** National

**Starting:**

**Ending:**

The System Operator advises there is a risk of insufficient generation and reserve offers to meet demand and provide N-1 security for a contingent event.

**Consequences on the power system:**

Reduced reserves for the CE risk may be dispatched, and/or the system operator may need to manage demand.

**For the period above you are requested to:**

**At:**

Increase energy offers

National

Increase instantaneous reserve offers

National

Update non-conforming load bids

National

Decrease demand by: using controllable load (that is not offered as instantaneous reserve) and increasing distributed generation

National

Submit difference bids for discretionary demand (For the identified time plus 1 hour either side)

National

**Consequences if insufficient responses by participants:**

If participant response across the country is insufficient, the system operator will manage demand to alleviate the Grid Emergency. The system operator may instruct the grid owner to disconnect feeders without further notice to connected parties.

System Operator will issue a GEN which may require participants to shed load to avoid disconnection or further system consequences.

For more information contact the Security Coordinator on 0800 488 500

p to date island residual information is available on the [WITS website](#).

More information on the System Operator's procedures for low residuals or insufficient energy and reserves is [here](#).

A revision of this notice will be issued if there is any change to the situation above.



## Grid Emergency Notice

**To:** GEN NZ Participants  
**Sent:**  
**Ref:** 4160215423

**From:** The System Operator  
**Telephone:** 0800 488 500  
**Email:** NMDData@transpower.co.nz

### Revision of:

**Cause:** Insufficient Generation offers National

**Region or GXP affected:** North Island, South Island

**Starting:**

**Ending:**

This is a New Zealand-wide emergency. The System Operator advises there is a risk of insufficient generation and reserve offers to meet demand and provide N-1 security for a contingent event.

### Consequences on the power system:

Reduced reserves for the CE risk may be dispatched, and/or the system operator may need to manage demand.

### For the period above you are requested to:

Increase energy offers

Increase instantaneous reserve offers

Decrease demand by: using controllable load (that is not offered as instantaneous reserve) and increasing distributed generation

### At:

National

National

National

### OR

Decrease demand by: X% across all connections.

The system operator requires an immediate XX MW's load reduction across the country to avoid further consequences.

### Consequences if insufficient responses by participants:

If participant response across the country is insufficient, the system operator will manage demand to alleviate the Grid Emergency. The system operator may instruct the grid owner to disconnect feeders without further notice to connected parties.

For more information contact the Security Coordinator on 0800 488 500

This notice is issued in accordance with Technical Code B - Emergencies, Schedule 8.3, Part 8

A revision of this notice will be issued if there is any change to the situation above.

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# Grid Emergency Report

**To:** Recipients  
**Sent:** Date Time sent  
**Ref:** Notice ID

**From:** The System Operator  
**Telephone:** 0800 488 500  
**Email:** NMData@transpower.co.nz

**Revision of:** Notice type, Notice ID, Date Time sent, Cause  
**Grid Emergency Notice ref:** GEN ID

<b>Cause:</b>	Insufficient generation offers to meet demand		
<b>At:</b>	Location(s)		
<b>Starting:</b>	Start D/T	Revised Start D/T	
<b>Ending:</b>	End D/T	Revised End D/T	
<b>Action Taken:</b>	(SAMPLE) Managed by participants' reduction in controllable load.		

Rule Reference: This notice is issued in accordance with Clause 13.101, Part 13