Load Management Protocol

Between	**WEL Networks Limited** (WEL)
and	**[trader] (**as trader)
with effect of	[protocol effective date]

Version	Date	Description of changes
1.0	June 2026	Initial version

1. Introduction

1.1 Purpose and application

This Load Management Protocol (Protocol) has been established pursuant to clause 5 of the Default WEL Agreement (DDA) between the **trader** and WEL. It constitutes the agreement between the **trader** and WEL required under clause 5.6(b) of the DDA for coordinating **controllable electrical load** activities during **system emergency events**.

This Protocol operates under the framework of the DDA between the **trader** and WEL. The **trader** and WEL will give effect to this Protocol in accordance with the provisions of the DDA, and in particular:

- Any disputes arising from activities under this Protocol must be addressed through the dispute resolution procedures specified in clause 23.
- Activities undertaken pursuant to this Protocol remain subject to the liability and indemnity provisions specified in clauses 24, 25, 26, 27 and 28.
- Information exchanged under this Protocol must be handled in accordance with the confidentiality provisions specified in clause 20.

The **trader** acknowledges the importance of complying with this Protocol to assist in maintaining **network** security before, during and following **system emergency events**. Failure to comply with the requirements of this Protocol may constitute a breach under clause 18 of the DDA.

The **trader's** failure to comply with the requirements of this Protocol will not constitute a breach of the DDA where that failure is solely as a result of; technical constraints of load control equipment or systems that pre-date the commencement of this Protocol, or contractual obligations owed by the **trader** to its customers that pre-date the commencement of this Protocol, provided that:

- the **trader** notifies WEL as soon as reasonably practicable which obligations it is unable to comply with, why it is unable to comply, and in respect of which ICPs;
- the **trader** complies with any alternative obligations or actions proposed by WEL (acting reasonably) to enable WEL to prevent or manage **system emergency events** within the constraints of existing load control equipment, systems and customer agreements;
- the **trader** ensures that any load control equipment or systems acquired, installed or commissioned after the commencement of this Protocol includes functionality to enable the **trader** to comply with the Protocol in full;
- where the **trader** has the power to amend existing customer agreements, it amends those agreements to enable it to comply with the Protocol in full; and
- any customer agreements entered into after the commencement of this Protocol enable the **trader** to comply with the Protocol in full.

1.2 Scope

This Protocol ensures **controllable electrical load** is available to WEL for managing **network** and Grid security. It applies to all types of **controllable electrical load**, and related enabling technologies connected to the **network**, regardless of whether the controllable device consumes or injects energy, and irrespective of the method and timing of the **controllable electrical load** management employed.

Where **controllable electrical load** is committed to respond to the System Operator under Instantaneous Reserves arrangements, such load shall:

- Continue to respond to System Operator signals during Grid Emergency events, including both developing events and immediate events;
- Be available for local **network system emergency event** response when controlling
- this load would prevent emergency feeder shedding, significant asset damage, or cascade

failure, subject to immediate notification to the System Operator.

The parties may agree in writing that parts of this Protocol may not apply to specific types of **controllable electrical load**, including for trial or pilot arrangements. Such trial agreements may be made in accordance with WEL**'s** discretion under clause 5.6(b) of the DDA.

Existing **controllable electrical load** subject to Instantaneous Reserves contracts entered into prior to shall be exempt from priority 3 control, as defined in Section 2.1, under this Protocol until such contracts are renewed or expire.

The **trader** agrees:

- to provide information and respond to instructions to coordinate its **controllable electrical load** in accordance with this Protocol and clause 5.6(c) of the DDA; and
- at all times, to operate its **controllable electrical load** as a reasonable and prudent operator in accordance with Good Electricity Industry Practice as required by clause 5.6(d) of the DDA.

This Protocol does not limit the rights of WEL to manage or shed load in accordance with clause 4 of the DDA.

WEL agrees:

- to provide clear information and instructions related to controllable electrical load in accordance with this Protocol.

1.3 Objectives

Both parties acknowledge that this Protocol promotes the coordinated management of **controllable electrical load** before, during and following **system emergency events** in a way that:

- Assists WEL to maintain system security through prioritised control of load management during **system emergency events**, and when conditions indicate an emergency situation is developing.
- Supports WEL in complying with System Operator instructions and Code obligations.
- Establishes transparency through clear visibility of **controllable electrical load** activities between the **trader** and WEL, including timely sharing of information.
- Protects the **network** through safe operation by the **trader** of **controllable electrical load**, as a reasonable and prudent operator, in accordance with Good Electricity Industry Practice.
- Creates a clear framework for coordination between parties during **system emergency events**.
- Ensures WEL provides the **trader** with clear visibility of system emergency events, so the **trader** can manage **controllable electrical load** in line with Good Electricity Industry Practice.

Successful application of this Protocol will support:

- All consumers being protected from avoidable and unnecessary electricity outages;
- Consumers with **controllable electrical load** having their **devices** managed according to their preferences, within the limitations of the network;
- **traders** having sufficient information about **network** conditions to avoid causing **system emergency events** while optimising management of **DER** across wholesale, **network** and other cost and revenue streams.

1.4 Definitions

In this Protocol, capitalised terms not defined here have the meaning given in the DDA or the Code. Strictly for ease of reference, the definition of **system emergency event** from the DDA

is replicated below.

communications means at least two forms of communication channels that must be maintained and available for **near real-time** response 24/7 to **system emergency events** between the **trader** and WEL for the purposes of this Protocol. These channels may include automated systems that do not require continuous human monitoring.

controllable electrical load means load or injectable electrical load capable of responding to automated or manual control signals (regardless of signal source) to use electricity at other times, which the **trader** or WEL has obtained the right to control in accordance with clause 5 of the DDA. This can include distributed generation, storage, heat pumps and electric vehicles, as well as other technologies.

Emergency Notice (DEN) means a directive issued by WEL to **traders** in relation to a **system emergency event**, in the form specified in Appendix 1 – Emergency Notice.

emergency notice area means the specific area of the **network** impacted by a **system emergency event**, as noted in an **Emergency Notice**.

maximum ramp rate means the restoration rate for **controllable electrical load,** specified by WEL in kW/minute.

near real-time means within 5 minutes.

network has the meaning given to that term in the DDA.

operating envelope is an **operating limit** with defined boundaries that **controllable electrical loads** must operate within at specific times and locations, to keep the **network** safe, specified by the maximum and minimum limits for active and reactive power exchange.

operating limit means a combination of any or all of the following: **operating envelope**, **maximum ramp rate**, and load diversity requirements specified by WEL for the safe operation of the **network**.

priority signal means a WEL-issued signal that takes precedence over all other control signals for directly or indirectly controlling **controllable electrical load**.

system emergency event means a grid emergency in accordance with the definition of that term in Part 1 of the Code and, in respect of the **network**, any emergency situation in which:

- public safety is at risk;
- there is a risk of significant damage to any part of the **network**;
- WEL is unable to maintain voltage levels within statutory requirements;
- an Unplanned Service Interruption affecting part or all of the **network** is imminent or has occurred.

trader means the party identified as such in the DDA.

Warning Notice (DEW) means a notice issued by WEL to **traders** to request that **traders** take voluntary action to help maintain **network** security and avoid mandatory load reduction under an **Emergency Notice**, in the form specified in Appendix 2 – Warning Notice Template.

2. Emergency Response Requirements

WEL has both **network** and Grid obligations regarding emergency response. During Grid **system emergency events**, as soon as reasonably practicable following a request by the System Operator, WEL must inform the system operator of its available **controllable electrical load**,[1] and to comply with system operator instructions to reduce demand.[2] As

[1] Clause 5A of Schedule 8.3, Technical Code B
[2] Clause 6 of Schedule 8.3, Technical Code B

required in the DDA, WEL must manage load on the **network** during **system emergency events** in accordance with its **system emergency event** management policy in Schedule 4 of the DDA, and the Code.[3]

The following requirements enable WEL to both meet Code and DDA obligations and implement a coordinated response to **system emergency events** with the **trader**.

2.1 Load control dispatch hierarchy

The following hierarchy is intended to guide WEL control room when determining required load reduction, and the **trader's** response, during **system emergency events**.

Priority	Load Type	Availability under this Protocol	Deployment Trigger
1	Load available to WEL**'s priority signal**	Always available for immediate WEL deployment via the **priority signal**	Any **system emergency event**
2	Load available to the **trader**	To avert imminent feeder shedding affecting Priority Loads[4] or cascade failure of the **network** or **Grid**.	**Emergency Notice**
3	Emergency feeder shedding	WEL direct action via disconnection of demand[5]	All other measures insufficient

2.2 Responses to System Operator instructions

When a CAN, WRN or GEN is issued by the system operator:

- Unless otherwise instructed by WEL via an **Emergency Notice**, no changes to **controllable electrical load** commands should occur.
- No further **controllable electrical load** should be added within 2 hours of the relevant trading periods.

2.3 WEL Warning Notices (voluntary response)

Where a **system emergency event** is anticipated with more than one hour advance notice WEL may issue a **Warning Notice** requesting voluntary load reduction actions from **traders**.

The **trader** shall endeavor to comply with **Warning Notice** requests where operationally feasible.

2.4 WEL Emergency Notices (required response)

If a **system emergency event** materialises or is anticipated to occur with less than one hour's advance notice, WEL will issue an **Emergency Notice**. For the avoidance of doubt, all requirements in an **Emergency Notice** remain in effect until WEL issues a formal end notice as specified in section 2.5.

- Where WEL has direct control capabilities, WEL's priority signals take precedence over trader control signals.
- WEL will issue load reduction requirements in the **Emergency Notice** as a percentage (%) target for all **traders** operating **controllable electrical load** on its **network**.

[3] Clause 4.3 of the **DDA**.
[4] As described in WEL's Security of Supply Participant Rolling Outage Plan
[5] In accordance with clause 7(19) of Technical Code B, Schedule 8.3.

- During rapidly developing or severe **system emergency event**, WEL may direct immediate reduction of all **controllable electrical load**, within the **emergency notice area(s)**.
- WEL will monitor **network** conditions throughout the **system emergency event** and may issue revised or new **Emergency Notices** in response to changing **network** conditions.

The **trader** is responsible for implementing load reduction targets in **Emergency Notices** for any **controllable electrical load** under their control. For the avoidance of doubt, the **trader** retains the right to determine which specific consumer loads are controlled to meet the load reduction target specified in the **Emergency Notice**.

- The **trader** must acknowledge receipt of any **Emergency Notice** within **near real- time**. For the avoidance of doubt, this may be an automated acknowledgement.
- Upon receiving an **Emergency Notice**, the **trader** must prioritise implementing the actions required by the **Emergency Notice**. For the avoidance of doubt, these actions may be carried out automatically by the **trader's** systems.

2.5 System Emergency Event conclusion

WEL will issue an **Emergency Notice** to formally signal the end of the **system emergency event**. Upon issuance of this end notice, the requirements of the **Emergency Notice** cease to apply.

- This notice will specify when normal operations may resume and include specific restoration procedures that must be followed by the trader when resuming normal operations, including any **operating limits** to maintain **network** stability.

If the **trader** requests a report from WEL, such request must be received by WEL within 72 hours after the **system emergency event's** end notice is sent. WEL must then submit a report within 5 **days** of receiving the request, submit a report documenting the cause of the **system emergency event**, a timeline of actions taken, WEL-controlled load reductions achieved, and any issues encountered.

If WEL requests a report from the **trader**, such request must be received by the **trader** within 72 hours after the **system emergency event's** end notice is sent. The **trader** must then submit a report within 5 **days** of receiving the request, documenting the timeline of actions taken, **trader**-controlled load reductions achieved, and any issues encountered.

3. Safe operation and information sharing to prevent and minimise the impact of System Emergency Events

To maintain safe **network** operations and minimise the likelihood and impact of **system emergency events**, WEL and **traders** must share operational information, as described in *Appendix 3*, to enable WEL to comply with Code obligations, and coordinate emergency response between multiple parties.

3.1 WEL information to trader

WEL may, from time to time, by notice to the **trader**, specify **operating limits**, to help prevent or respond to a **system emergency event**. This information may include some or none of the following:

- **operating envelope** for different network areas, or the whole of network.
- **maximum ramp rates** that vary by network area, time of day, the types of ICPs, different capacities and capabilities of network assets, seasonal factors, and are proportional to the current loading of the network.
- The **maximum ramp rate(s)** may vary for different groups of ICPs connected to the same GXP or zone substation (such as ICPs on different feeders), subject to the changing constraints on the **network**.
  - Load diversity requirements that specify how restoration of **controllable electrical load** must be distributed across **network** assets.
  - The **trader** must implement measures in their restoration processes to prevent concentration of load that could overload the **network** (such measures could include randomisation).
- Where **operating limits** have been specified, the **trader** must establish and maintain processes and systems to manage **controllable electrical load** within these limits.
- If the **operating limits** are exceeded, or are forecast to be exceeded imminently, WEL may issue an **Emergency Notice** to prevent or respond to a **system emergency event**.

3.2 Trader information to WEL

To enable WEL to comply with its Code obligations and coordinate emergency response with **traders** (subject to Commerce Act 1986 competition law):

- **Weekly**, on a **Monday**, **traders** must share with WEL details of all Customer's **controllable electrical load** under clause 5.2 of the DDA,
- This data file, as per template as described in *Appendix 3*, is to provide a full view of all **controllable electrical load** information, including newly obtained rights to control, recent loss of right to control, and any changes to the amount or availability of **controllable electrical load** information previously provided.

The **trader** must notify WEL within **near real-time** of any control system failures affecting communication systems, control capabilities, or monitoring systems that may impact the **trader's** ability to respond to an **Emergency Notice** instruction.

The **trader** shall coordinate with WEL to conduct a test of the **trader's** capability to respond to **Emergency Notices** either once per calendar year, or after substantial changes to the technical systems or operational procedures in relation to **controllable electrical load**. This test shall include a simulated **Emergency Notice** and shall demonstrate the **trader**'s ability to manage **controllable electrical load** in accordance with the Protocol. The **trader** must provide the results of the test to WEL.

4. Communication requirements

This section outlines **communication** requirements that support coordinated emergency response.

4.1 Contact management

Both WEL and **trader** must establish and maintain an Contact Register that includes the primary and alternative contacts as specified in Schedule 3, or as otherwise agreed. Any changes to contact details should be advised as soon as practicable.

WEL and **trader** may establish and maintain appropriate group **communication** channels to facilitate efficient multi-party **communications** during **system emergency events** or as otherwise agreed. Protocol Governance and Management

4.2 Review and update process

This Protocol may be reviewed annually by WEL. WEL will conduct this review in consultation with participating **traders** and any other external parties that WEL considers should be included.

WEL or a participating **trader** may request an earlier review of this Protocol if, as a result of:

- The occurrence of a **system emergency event**, or technological advancements that materially affect **controllable electrical load** capabilities,
- There are material changes to law or the regulatory environment that affect the operation of this Protocol, or
- WEL or a participating **trader** determines that the Protocol should be amended to better enable WEL and **traders** to avoid and manage **system emergency events.**

Appendix 1 – Emergency Notice template

DEN

WEL Emergency Notice			**New / Revision**
To	[trader]	**From**	WEL networks
Sent	[Date Time]	**Telephone**	[Control room]
Ref:	[Emergency Notice unique identifier]	**Email**	[Control room]
Revision of:	[Prior notice reference, if applicable]		

SEE cause:	
Emergency Notice area:	[Affected network zones / GXPs / Zone substations / ICPs (if available)]
Starting:	[Start date time]
Ending:	[End date time]

For the period above you are required to:	[Specific instructions issued by WEL to the trader (e.g. Decrease demand by:")]
Decrease controllable load by:	[The amount of load control required (%) to be reduced by participants during the event]

Post-event restoration requirements:	[The maximum ramp rates and load diversity requirements that must be adhered to during restoration]

Consequences if insufficient response:	[The consequences if participant responses is insufficient (e.g. 'WEL will manage demand to alleviate the system emergency event, and may disconnect feeders without further notice to affected parties')]

A revision of this notice will be sent it there is any change to he situation above, and upon conclusion of the system emergency event.

For more information contact WEL networks' Control Room on [control room number]

This notice is issued in accordance with the Load Management Protocol

Appendix 2 – Warning Notice template

DEW

WEL Warning			
To	[trader]	**From**	WEL networks
Sent	[Date Time]	**Telephone**	[Control room]
Ref:	[Emergency Notice unique identifier]	**Email**	[Control room]
Revision of:	[Prior notice reference, if applicable]		

SEE cause:	
Warning Notice area:	[Affected network zones / GXPs / Zone substations / ICPs (if available)]
Starting:	[Start date time]
Ending:	[End date time]

For the period above you are required to:	[The specific instructions issued by WEL to the trader (e.g. Follow any load management instructions")]
Capacity Shortfall:	[The amount of load control required (%)during the event]

Potential consequences if unresolved:	[Description of what may occur if voluntary action is insufficient, e.g., mandatory Emergency Notice, customer interruptions]

This is a request for voluntary action. If insufficient response is received, mandatory load reduction may be required via Emergency Notice.

For more information contact [WEL's] Control Room on [control room number].

This notice is issued in accordance with the Load Management Protocol.

Appendix 3 – Data exchange templates

Part A: WEL information to **trader**

If applicable to the **network**, WEL will provide the following information as described in clause 3.1:

- **operating envelope** for different **network** areas and conditions, or the whole of **network**.
- **maximum ramp rates** which may vary by **network** area and time of day.

Load diversity and measures (such as randomisation) that specify how restoration of **controllable electrical load** must be distributed across **network** assets.

Part B: **trader** information to WEL

The **trader** must provide the information defined in Schedule 1.

Schedule 1 – Trader Data Supply Specification

This schedule lays out the functional specifications for connection point data that is be provided by the trader under the load management protocol. This schedule may be updated from time to time by WEL with 30 days notice (or less by agreement of both WEL and the trader).

The management and utilization of the data would comply with the Registry Customer Information protocol (v11), with the following details:

Delivery: Data files are to transferred to WEL via the Electricity Authority EIEP hub (sftp.electricityregistry.co.nz) mechanism.

Data security: As stipulated in the protocol.

Snapshot/Incremental: Snapshot, all applicable connection points are to be included each file

Data update frequency: Weekly, uploaded to the destination folder every Monday before 23:59 PM NZST.

Data file type: Comma-separated value (.CSV) file

Data file naming convention: As per EIEP file naming conventions with LMPDATA as file type.

i.e. WAIK_E_<trader Identifier>_LMPDATA_YYYYMM_YYYYMMDD_<unique ID>.csv

{Char 4_Char 1_Char 4_Char 7_yyyymm_yyyymmdd_Char 60}

where `YYYYMM` denotes the year-month of the snapshot, `YYYYMMDD` denotes the snapshot date, with the components concatenated using the underscore character to assist readability and with an extension of .csv.

e.g. WAIK_E_RETA _LMPDATA_202502_20250224_2355.csv

Data columns: Refer to Table A.1.

Table A.1 Data Dictionary

Column Name	Format	Mandatory/Optional/ Conditional	Description	Example
ICP	Char 15	Mandatory	Unique identifier for an installation control point (ICP).	012345678AB12X
meter	Char 15	Mandatory	Meter serial ID of the meter installed at the ICP.	999999999
shared control	Char 1	Mandatory	If the controllable load at the ICP is also controllable by WEL Y = shared, if it is not N = not shared, U = unknown	Y
controllable load kW	Float	Mandatory	Total controllable load in kW at the ICP. This should be the nameplate, undiversified controllable load.	3.0
energy storage kWh	Float	Mandatory	Total available storage in kWh at the ICP. This should be the nameplate, fill capacity storage. Devices with no storage will show 0 kWh. Can be approximation.	11.5
control priority	Char 1	Mandatory	Either 1,2 or 3 according to the priority classification	1
scheduled daily off TPs	Char 185	Conditional	If the controllable load is on a fixed schedule, like smart meter controlled hot water with calendar control, provide a comma separated list of the daily trading periods when the controllable load is scheduled to be OFF (not drawing power from the grid). The list must be enclosed by double quotation marks (e.g. “1, 2, 3”). Trading periods are 1-48 as defined by the Electricity Authority. If left blank WEL will assume that the controllable load is dynamically responding to control signals from the trader and will choose how to evaluate the potential network impact.	“15, 16, 17, 18, 19, 20, 21, 22, 35, 36, 37, 38, 39, 40, 41, 42”
random restore minutes	Integer	Mandatory	Defined period in minutes during which controllable load is set to randomly restore following a controlled OFF period for the purpose of avoiding synchronized peaks	30

Table A2 Example scenarios in a 7 day period

Connection point	meter	shared control	Controllable load kW	energy storage kWh	control priority	scheduled daily off TPs	random restore minutes
A	1	Y	3.0	10	1	“15, 16, 17, 18, 19, 20, 21, 22, 35, 36, 37, 38, 39, 40, 41, 42”	10
B	2	Y	3.0	10	1	“15, 16, 17, 18, 19, 20, 21, 22, 35, 36, 37, 38, 39, 40, 41, 42”	10
C	2	Y	3.0	10	1	“15, 16, 17, 18, 19, 20, 21, 22, 35, 36, 37, 38, 39, 40, 41, 42”	10
D	1	Y	3.0	5	1	“15, 16, 17, 18, 19, 20, 21, 22, 35, 36, 37, 38, 39, 40, 41, 42”	10
E	2	Y	3.0	5	1	“15, 16, 17, 18, 19, 20, 21, 22, 35, 36, 37, 38, 39, 40, 41, 42”	10
F	1	Y	3.0	5	1	“15, 16, 17, 18, 19, 20, 21, 22, 35, 36, 37, 38, 39, 40, 41, 42”	10

Explanation
Example snapshot of hot water, where EDB has ripple control and where trader has scheduled hot water to be turned off daily via a schedule from 0700-1100 and 1700-2100.

Connection point	meter	shared control	Controllable load kW	energy storage kWh	control priority	scheduled daily off TPs	random restore minutes
A	1	N	11.0	0	2		30
B	1	N	7.0	0	2		30
C	1	N	11.0	0	2		30
D	1	N	7.0	0	2		30
E	1	N	7.0	0	2		30
F	1	N	7.0	0	2		30

Explanation
Example snapshot of controlled EV chargers with no EDB control and no scheduled control

Schedule 2 – Emergency Contacts

WEL Networks

Operations Control Room (24/7)	DDI: +647 850 3130 Mobile: 27 499 5734 Email: ControlCentreOperator@wel.co.nz
Warning / Emergency notifications	DDI: +647 850 3130 Mobile: +6427 499 5734 Email: ControlCentreOperator@wel.co.nz
Management escalation point	
main contact	DDI: +6478503163 Mobile: +64272275668 Email: Simon.Parker@wel.co.nz
back up contact	DDI: +6478503220 Mobile: +6421681350 Email: Steve.hull@wel.co.nz
Group communication channel/s	

[trader]

Operations Control Room (24/7)	[phone] [email]
Warning / Emergency notifications	[primary email] [cc email]
Management escalation point	
main contact	[name] [direct phone] [email]
back up contact	[name] [direct phone] [email]
Group communication channel/s	[details]