



# Earthquake Readiness

## Stakeholder Engagement

5 December 2017

Letter to Stakeholders (letter to support readiness investment)

Dear Stakeholder

We are writing to seek your support for important earthquake preparedness work for the region.

You may recall the 2012 Lifelines report which outlined response times to a notional 7.5 magnitude quake at Thorndon. All Wellington utilities have been working hard since then to address the vulnerabilities it identified. Wellington Water, for example, has a significant seismic resilience programme underway to find and store more water, and everyone's work has been given added impetus following the 7.8 magnitude Kaikoura earthquake in November last year.

For our part, the Lifelines report showed that Wellington will initially be without power for several weeks. Since it was published, we've invested around \$1M a year in emergency generators and seismic investigation work. But we have just completed a more significant study into how the electricity network's response to a seismic event can be further improved and how we can get the power back on more quickly following a major earthquake. This is important to help communities recover at home, as evacuation from the region will be difficult.

The study shows that there are a range of relatively quick wins, which can be completed within the next three years for a modest increase in power prices. This price increase cannot be undertaken unless we first obtain Commerce Commission approval through a 'streamlined' CPP<sup>1</sup>. As part of this process, the Commission has requested that we show local support for the work and the electricity price increase that would be required to pay for it.

A draft high level business case supporting the project has been shared with the Commerce Commission. A fact sheet summary of this is attached.

**We urge you to study this information and then, if you believe you could support the proposal and the associated price increase in principle, to put that in writing and send it to us as soon as possible.** We are obliged to deliver a more substantive case to the Commission in late-October. If they decide to progress the matter, it would then be open to more substantive community submissions, allowing you a further say.

We thank you in anticipation of receiving your support to continue to provide great service to both our community and businesses in the Wellington region.

Please do not hesitate to contact me directly for any further discussion.

Regards

Greg Skelton  
CEO  
WELLINGTON ELECTRICITY  
email [gskelton@welectricity.co.nz](mailto:gskelton@welectricity.co.nz)

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<sup>1</sup> Customised Price-quality Path

## Fact Sheet – September 2017

### Earthquake readiness for the Wellington area electricity network

- Wellington Electricity supplies electricity to approximately 400,000 consumers through over 167,000 installation connection points (ICPs). Its network covers the Wellington city, Porirua and the Hutt Valley regions.
- The company is hoping to invest up to \$32M in capital expenditure for some immediate earthquake readiness work around the local electricity network area (covered in map – see over). Before it can fund this however, it must first obtain the approval of the Commerce Commission.
- A 2012 Lifelines report showed the Capital has major infrastructure vulnerabilities, not only from the direct impact of a large earthquake but also from road links being cut by landslides, delaying access into, and around the region for repair crews.
- The local electricity network rates highly on reliability in normal conditions, as many of its high voltage cables are underground. However this also makes it vulnerable in an earthquake. Much of the network traverses the fault-line from Karori through to Upper Hutt, risking extensive damage to cables and substations from both ground movement and liquefaction.
- Wellington Electricity's readiness proposal covers six high priority / quick win areas:
  - emergency spares to build temporary high-voltage overhead lines;
  - a mobile substation and switchboard to reconnect supply;
  - a wider inventory of spare equipment such as cable spares and switchgear for faster return to service;
  - further work to strengthen substation buildings to avoid delays in returning supply; and
  - more resilient IT and telecommunications links so communications are kept available to aid response.
- The company proposes to spread the new back-up equipment round the region to increase our ability to respond in the event of transport links being cut.
- Wellington Electricity's proposal has also been informed by a careful study of the impact of the 2010 and 2011 Canterbury earthquakes on that region's electricity network. Pre-quake strengthening of substation buildings there, for example, resulted in much earlier power restoration than would otherwise be the case.
- Wellington Electricity estimates consumers would get a direct economic benefit from investing in readiness equipment which would allow for the earlier restoration of power to improve community welfare and economic recovery following an event.

- The company believes the readiness work could be completed within three years for only a modest increase in prices. The exact increase is yet to be determined, but would be in the region of \$1.50 to \$1.90 per month for an average residential consumer. The Commerce Commission will need to approve the proposal if it is to go ahead.
- Finally, this proposal is an interim step to a wider resilience plan incorporating other Wellington Lifelines utilities and separate investment decisions. These will be subject to the new natural hazards National Policy Statement expected to be issued in 2018.

ENDS

The Wellington area electricity network (area in yellow):



1 November 2017

Greg Skelton,  
Chief Executive Officer  
Wellington Electricity  
PO Box 31049  
Lower Hutt 5040

Dear Greg,

**Letter of Support - Wellington Electricity Readiness Application**

Wellington City Council (WCC) is pleased to provide a letter of support for Wellington Electricity's (WE\*) application for a special price path readiness project. WCC understands that if approved, the project will see in the vicinity of \$32million of investment in emergency readiness work in the following areas:

- emergency spares to build temporary high-voltage overhead lines;
- a mobile substation and switchboard to reconnect supply;
- a wider inventory of spare equipment such as cable spares and switchgear for faster return to service;
- further work to strengthen substation buildings to avoid delays in returning supply;
- and
- more resilient IT and telecommunications links so communications are kept available to aid response.

WCC understands that this project will result in an increase in lines charges to cover this investment. WCC accepts the price-quality trade-off is appropriate, so as to provide the increased readiness in an accelerated timeframe, over the next few years.

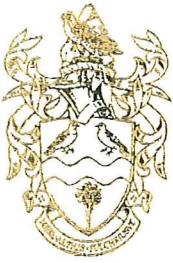
WCC is working with the Wellington Lifelines Group looking at integrated wider resilience across all utilities and understands that it is likely there will be more projects emerging from that work. Options for funding subsequent activities will be looked at once those projects are more clearly refined and fully developed.

Yours sincerely



Derek Baxter  
City Engineer  
WELLINGTON CITY COUNCIL.

Copy to: Mayor Justin Lester  
CEO Kevin Lavery



OFFICE OF THE MAYOR  
CITY OF UPPER HUTT

Greg Skelton  
Chief Executive Officer  
Wellington Electricity Lines Limited  
P O Box 31049  
Petone  
Lower Hutt 5040

1 November 2017

Dear Greg

**Wellington Electricity's Earthquake Readiness Business Case**

Many thanks for taking the time to meet with Chris Upton and myself on 31 October at the Upper Hutt City Council Offices. It was very useful to get an overview of the proposed Earthquake Readiness Business Case that you intend to submit to the Commerce Commission as part of a funding approval process in late November 2017.

As you are aware we are very familiar with the unique challenges that the Wellington region faces in terms of its ability to deal with the impact of a major earthquake, through Wellington Water's seismic resilience programme.

We are of the view that this first stage of your investment programme, where you are proposing to spend around \$32 million on readiness spares, is an important first step to ensuring that the power supply can be brought back so our communities can start the recovery process.

We see ourselves as partners in this effort and fully support your proposal.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Wayne Guppy'.

Wayne Guppy  
**MAYOR**



greater WELLINGTON  
REGIONAL COUNCIL  
Te Pane Matua Taiao

2 November 2017

File Ref: EXTR-8-362

Greg Skelton  
Chief Executive  
Wellington Electricity  
PO Box 31049  
Petone  
Lower Hutt 5040

Office of the Chairperson  
PO Box 11646  
Shed 39, Harbour Quays  
Wellington  
T 04 384 5708  
F 04 385 6960  
www.gw.govt.nz

Dear Greg

### Wellington Electricity's Earthquake Readiness Business Case

Many thanks for taking the time to meet with Greg Campbell and myself on 1 November. It was very useful to get an overview of the proposed Earthquake Readiness Business Case that you intend to submit to the Commerce Commission as part of a funding approval process in late November 2017.

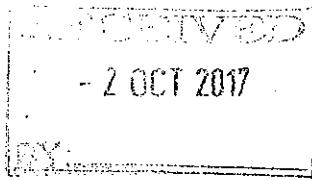
As you are aware we are very familiar with the unique challenges that the Wellington region faces in terms of its ability to deal with the impact of a major earthquake, through our involvement with the Wellington Region Emergency Management Office and the Wellington Lifelines Group.

We are of the view that this initial "readiness" stage of your investment programme, where you are proposing to spend around \$32 million on readiness spares, is an important first step to ensuring that the power supply can be restored as quickly as possible and enable our communities to start the recovery process.

We see ourselves as partners in this effort and fully support your proposal.

Yours sincerely

Chris Laidlaw  
Chair



Greg Skelton  
Chief Executive Officer  
Wellington Electricity  
PO Box 31049  
Lower Hutt 5040

26 September 2017

### **Emergency Electrical distribution Stores**

Dear Greg,

We understand you are going to approach the Commerce Commission with a proposal to consult your customers on funding emergency stores to accelerate the flow of electricity immediately following an earthquake or other similar natural or man-made event.

Wellington Water considers itself to be resilience savvy. What I mean by this is that we not only have a good understanding of the vulnerabilities of our network but we are now moving to:

1. Ensure every household has emergency water and wastewater provisions at home;
2. By 30 June 2018 we will have commissioned the ability to provide 20 litres per person per day of drinking water within 1 kilometre of every home across the region should our network suffer outage from a seismic event; and
3. We are developing, with you and other lifeline entities, a case for accelerated investment in resilient networks so we won't be so vulnerable to the effects of earthquakes and other events in the future.

We are very dependent on the functioning of a working electricity distribution network. While we can manage in an emergency with generators and the like, the quicker power can be re-established to our pumps and other equipment the quicker we can resume water and wastewater services to ours and your customers.

We wholly support the idea that supplies are procured and stored within the expected, post-earthquake islands across the region. We cannot rely on a fully functioning transport network so being able to respond to customers within each island will deliver the most appropriate post event level of service.



Based on our own work we think customers across Wellington will be very supportive of your proposal, and quite possibly surprised such emergency preparedness is not already in place.

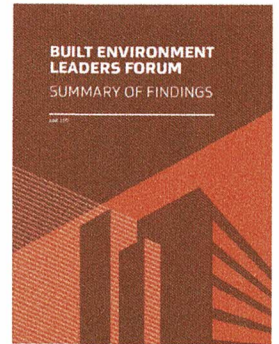
Yours sincerely

A handwritten signature in black ink, appearing to read 'Colin Crampton', with a long horizontal flourish extending to the right.

Colin Crampton.  
Chief Executive

Greg Skelton  
Chief Executive Officer  
Wellington Electricity Lines Limited  
PO Box 31049,  
Lower Hutt 5040

21 November 2017



**Built Environment  
Leaders Steering  
Committee**

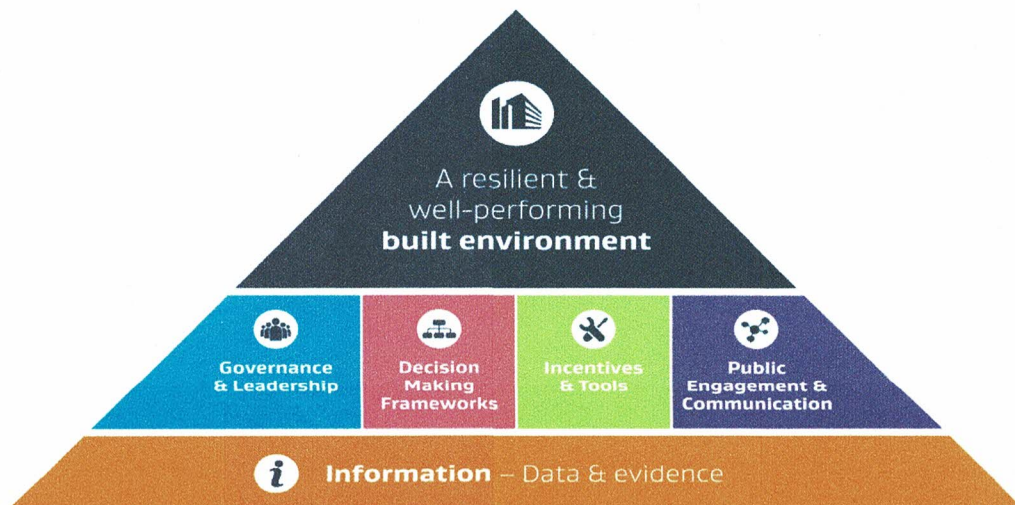
**Re: Earthquake Preparedness Work, Submission in Support**

Dear Greg,

We refer to your letter dated 25 October 2017 setting out the background and seeking support for an initiative to invest in earthquake preparedness work for the Wellington region.

We are familiar with much of the background for this work since the 2012 Lifelines report and the consequential necessity to secure Commerce Commission approval for a Customised Price Path. As further background, the Built Environment Leaders Forum held in September 2015 was attended by around 200 leaders from central government, local government, private sector and international specialists. At that Forum you presented on this case as known at that time. The Forum resulted in a Summary of Findings document available via either the Earthquake Commission website or the Building Research Association of New Zealand website.

The essence of the findings is summarised in the following diagram:



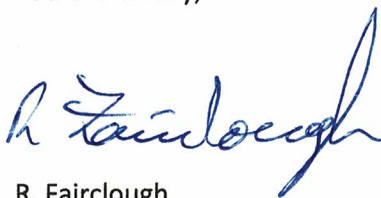
The Wellington Electricity proposal is consistent with all the priority themes of; Governance & Leadership, Decision-making Frameworks, Incentives & Tools, and Public Engagement & Communication. More specifically the proposal is consistent with the detailed actions of:

- Develop stronger collaboration between agencies in the public and private sector to improve built environment performance.
- Identify and improve the resilience of New Zealand's most critical infrastructure components/systems.
- Improve consistency in approach across regulations, standards, codes, and guidelines applicable in the built environment.
- Assess if the right financial and non-financial instruments are in place to support built environment resilience improvement and optimise risk management.
- Engage the public on levels of service expectations for infrastructure.
- Develop the evidence to inform improved governance and leadership, decision-making frameworks ...

We are familiar with this initiative being an interim step to a wider resilience plan incorporating other Wellington Lifelines utilities and commend Wellington Electricity for their active participation in this.

The proposal is consistent with the Built Environment Leaders Forum findings and is aligned with the forums aims.

Yours faithfully,



R. Fairclough

**Chair,  
Built Environment Leaders Steering Committee**



Genesis Energy Limited  
The Genesis Energy Building  
660 Great South Road  
PO Box 17-188  
Greenlane  
Auckland 1051  
New Zealand

T. 09 580 2094

20 November 2017

Greg Skelton  
Chief Executive Officer  
Wellington Electricity Lines Limited  
PO Box 31049  
Petone  
Lower Hutt 5040  
**WELLINGTON**

Dear Greg

### **Wellington Electricity's Earthquake Readiness Business Case**

Many thanks for taking the time to meet with Rebekah Cain and myself on 1 November 2017. It was very useful to gain an understanding of the proposed Earthquake Readiness Business Case that you intend to submit to the Commerce Commission as part of a funding approval process in late November 2017, and to share ideas about how we may be able to work proactively together to deliver better outcomes for New Zealanders.

As New Zealand's largest retailer of electricity and gas, our priority is on ensuring the energy sector has the ability to offer optimal outcomes for consumers. Making sure New Zealanders have the best energy tools available to do everything from running their businesses, to heating their homes in the most effective and efficient way possible. For Genesis, this means that everyone has choice, comfort and control over their energy consumption. With that as a backdrop, we are always keen to understand the rationale for changes that may impact on our customers, and make sure those changes deliver real customer value.

As Genesis has a large customer base in the Wellington region, we obviously share your concern for their welfare in the event of a major earthquake. Given a significant pan-industry process has been undertaken and identified a number of Wellington specific issues, we recognise that this "readiness" stage of your investment programme, where you are proposing to spend around \$32 million on readiness spares, is an important first step to ensuring that the power supply can be brought back quickly so our communities can start the recovery process. While we are sure there has been significant learnings from the Christchurch earthquakes, we would also continue to encourage you to make these spares available to others in times of need. The key being that a sharing lines company environment will be better for customers rather than each attempting to hold readiness spares – I understand this is part of the ongoing discussions and we would support this.

As part of our discussions on readiness, I also welcomed the opportunity to discuss further with you a schools-based emergency solution opportunity. Genesis has been involved with many schools across the Wellington region for over a decade, with our Schoolgen programme having installed solar on 92 schools across New Zealand. Through our involvement with these schools

Genesis has gained a wealth of experience and knowledge. While providing the opportunity for young New Zealanders to learn about energy, energy efficiency and sustainability those schools' solar panels combined to produce 489 MWh of electricity last year, making Genesis energy one of the largest solar providers in New Zealand. Genesis looks forward to discussing this opportunity in the near future.

We have a responsibility to our customers and we see ourselves as partners with you in this effort. We support Wellington Electricity's ability to submit a streamlined customised price path and look forward to considering the detail of the proposal, when available.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Schmidt', written in a cursive style.

Dean Schmidt  
**Executive General Manager**  
**Corporate Affairs and Transformation**

23 November 2017

Greg Skelton  
Chief Executive Officer  
Wellington Electricity Lines Limited  
P O Box 31049  
Lower Hutt 5040

Dear Greg

**Wellington Electricity's Earthquake Readiness Business Case**

Many thanks for taking the time to meet me and my team on 10 November 2017. It was very useful to get an overview of the proposed Earthquake Readiness Business Case that you intend to submit later this month to the Commerce Commission as part of a funding approval process.

As New Zealand's peak business advocacy body, we are keenly interested in the potential and prosperity of all New Zealanders. Therefore how we mitigate, and then manage disruptions to our key infrastructure is important to us.

With this in mind, we recognise that this "readiness" stage of your investment programme, where you are proposing to spend around \$32 million on readiness spares, is an important first step to ensuring that the power supply can be brought back so our businesses and communities can start the recovery process.

Therefore, we are supportive of measures, such as those proposed in your business case, that seek to improve our current position, so long as they are cost effective and appropriately balance the additional costs to consumers with the benefit received.

Kind regards



Kirk Hope  
Chief Executive

**Great value energy**  
**for families and businesses**

**nova**  
**energy**

15 November 2017

*Nova Energy Limited*  
*PO Box 10141, Wellington 6143*  
[www.novaenergy.co.nz](http://www.novaenergy.co.nz)

Greg Skelton  
Chief Executive Officer  
Wellington Electricity Lines Limited  
P O Box 31049  
Petone  
Lower Hutt 5040

By email: [gskelton@welectricity.co.nz](mailto:gskelton@welectricity.co.nz)

Dear Greg

**Wellington Electricity's Earthquake Readiness Business Case**

I have been briefed on Wellington Electricity's (WE) plans to improve its earthquake readiness capabilities following your presentation to the ERANZ forum on 9 November. I understand that you intend to submit WE's Earthquake Readiness Business Case to the Commerce Commission as part of a funding approval process this month.

As an electricity and gas retailer with customers and staff in the Wellington region, Nova Energy shares your concern for their welfare in the event of a major earthquake. With our customers and staff in mind, we recognise the value of WE being ready to respond quickly and effectively to restore power supplies in the event of a major earthquake; thereby ensuring communities can start the recovery process without undue delay.

We understand WE is proposing to spend around \$32 million on equipment that falls outside WE's normal operational requirements, as the first step in its "readiness" investment programme.

Nova Energy has a responsibility to our customers to ensure that we meet their electricity and gas requirements; as such we see ourselves as partners with you in this effort and fully support your proposal.

Yours sincerely



Babu Bahirathan  
CEO

Commerce Commission  
2017  
via online submission:

5 November

**Earthquake Readiness for the Wellington Area Electricity Network**

The Wellington Region Chambers of Commerce (the Chamber) has been the voice of business in the Wellington region for 161 years since 1856 and advocates for policies that reflect the interest of Wellington's business community and the development of the Wellington economy as a whole. The Wellington Region Chambers incorporate the Wellington, Hutt Valley, Porirua, Kapiti Coast and Wairarapa Chambers of Commerce. The respective Chambers are accredited through the New Zealand Chamber of Commerce network.

We are writing to express our support for Wellington Electricity's proposal and associated price increase to put in place measures that will increase the earthquake readiness for the Wellington Area electricity network.

Wellington Electricity supplies electricity to approximately 400,000 consumers through over 167,000 installation connection points (ICPs). Its network covers the Wellington city, Porirua and the Hutt Valley regions. As you will be aware, Wellington Electricity is hoping to invest up to \$32 million in capital and operational expenditure for some immediate earthquake readiness work around the local electricity network area.

The company believes the readiness work could be completed within three years for only a modest increase in prices. The exact increase is yet to be determined, but would be in the region of \$1.50 to \$1.90 per month for an average residential consumer.

From our point of view, this approval is simply about providing contingency in the case of earthquakes, which we know occur regularly in the Wellington Area. This is about ensuring readiness, not improving resilience. This work will also provide a direct economic benefit from investing in readiness equipment which would allow for the earlier restoration of power to improve community welfare and economic recovery following an event.

We know that there is much more work to be done in the area of electricity resilience to enable our recovery following a large earthquake, but is an interim step to a wider resilience plan incorporating other Wellington Lifelines utilities and separate investment decisions.

We urge the Commerce Commission to approve this application, especially given the marginal increase per residential customer per month. We believe it is a key step in the right direction towards improving our electricity readiness in the Wellington Area, and our wider ability to cope in the case of an earthquake.

Yours sincerely,



John Milford, Chief Executive, Wellington Chamber of Commerce



23 November 2017

Greg Skelton  
Chief Executive Officer  
Wellington Electricity Lines Limited  
P O Box 31049  
Petone  
Lower Hutt 5040

Dear Greg

**Wellington Electricity's Earthquake Readiness Business Case**

Many thanks for taking the time to meet with Tony Stallinger and myself on 22 November at the Lower Hutt City Council Offices. It was very useful to get an overview of the proposed Earthquake Readiness Business Case that you intend to submit to the Commerce Commission as part of a funding approval process in early December 2017.

It is hard to disagree with the pragmatic and sensible initiatives that are proposed in this first stage of your investment programme. We share your concern for community welfare in the event of a major earthquake and are very supportive of this investment as it will ensure that the power supply can be brought back sooner than is currently the case. We see this as a key enabler for our residential and business communities to start the recovery process.

In addition to supporting your readiness expenditure of around \$31 million, we are pleased to see you working with other utilities on longer term resilience initiatives.

Should there be anything further we can assist with, please do not hesitate to contact me.

Regards



Ray Wallace

Lower Hutt Mayor



28 November 2017

Greg Skelton  
Chief Executive Officer  
Wellington Electricity Lines Limited  
P O Box 31049  
Petone  
Lower Hutt 5040

Dear Greg

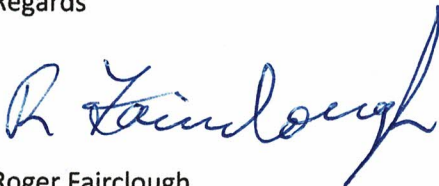
**Wellington Electricity's Earthquake Readiness Business Case**

Many thanks for sending the New Zealand Lifelines Council the background detail on your plans to improve Wellington Electricity's capability to respond to a major earthquake in the Wellington region. The council has met and discussed the summary you provided on the business case.

As you are aware, in this context, New Zealand Lifelines refers to all energy, transport, water and telecommunications services required to support resilient communities. Wellington Electricity's short term readiness initiatives and longer term resiliency plans are consistent with the New Zealand Lifeline Council's mission and purpose.

We are confident that the Commerce Commission will give your application fair consideration and we look forward to continuing to work with you and other utility providers to improve Wellington's, and ultimately New Zealand's, infrastructure resilience.

Regards

A handwritten signature in blue ink, appearing to read "R Fairclough".

Roger Fairclough  
**Chair – New Zealand Lifelines Council**



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20 November 2017

Greg Skelton  
Chief Executive Officer  
Wellington Electricity  
PO Box 31049  
Lower Hutt 5040

Letter send via email: [Gskelton@welectricity.co.nz](mailto:Gskelton@welectricity.co.nz)

Dear Greg

### **Earthquake Readiness for the Wellington Area Electricity Network**

CentrePort's primary objective is to facilitate the safe and efficient movement of cargo and people by providing the necessary infrastructure and expertise. As the Chief Executive I am only too familiar with the need for key strategic assets to be resilient in the face of natural disaster. On the 14th of November 2016 the 7.8 Kaikoura earthquake significantly damaged key infrastructure assets at the Port. To this day we continue to assess damage, make temporary repairs while continuing Port operations that support 21,000 jobs in the regions.

We are therefore writing to express our support for Wellington Electricity's proposal and associated price increase to put in place measures that will increase the earthquake readiness for the Wellington Area electricity network.

Wellington Electricity supplies electricity to approximately 400,000 consumers through over 167,000 installation connection points (ICPs). Its network covers the Wellington city, Porirua and the Hutt Valley regions. As you will be aware, Wellington Electricity is hoping to invest up to \$32 million in capital and operational expenditure for some immediate earthquake readiness work around the local electricity network area.

The company believes the readiness work could be completed within three years for only a modest increase in prices. The exact increase is yet to be determined, but would be in the region of \$1.50 to \$1.90 per month for an average residential consumer.

From our point of view, this approval is simply about providing contingency in the case of earthquakes, which we know occur regularly in the Wellington Area. This is about ensuring readiness, not improving resilience. This work will also provide a direct economic benefit from investing in readiness equipment which would allow for the earlier restoration of power to improve community welfare and economic recovery following an event.

We know that there is much more work to be done in the area of electricity resilience to enable our recovery following a large earthquake, but is an interim step to a wider resilience plan incorporating other Wellington Lifelines utilities and separate investment decisions.

We urge the Commerce Commission to approve this application, especially given the marginal increase per residential customer per month. We believe it is a key step in the right direction towards improving our electricity readiness in the Wellington Area, and our wider ability to cope in the case of an earthquake.

Kind regards

A handwritten signature in black ink, appearing to be 'Derek Nind', written over a faint rectangular box.

Derek Nind  
Chief Executive Officer



22 November 2017

Greg Skelton  
Chief Executive Officer  
Wellington Electricity Lines Limited  
PO Box 31049  
Petone  
Lower Hutt 5040

Dear Greg

### **Wellington Electricity's Earthquake Readiness Business Case**

Referencing your plans to improve Wellington Electricity's capability to respond to a major earthquake in the Wellington region.

Massey University is generally very supportive of any initiatives that will reduce ours, and others, exposure to the risk of a major earthquake in Wellington. Massey shares concerns for the social and commercial hardships that extended outages may bring to our students, staff and associated businesses.

Whilst we are supportive, we note the price increase proposed, comes at a time when we, like many others, are looking to reduce our energy costs. Any initiatives that could be implemented to reduce the price impact would therefore be welcome.

Regards

**Murray Foreman**  
National Facilities Director

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27 November 2017

Greg Skelton  
Chief Executive Officer  
Wellington Electricity Lines Limited  
P O Box 31049  
Petone  
Lower Hutt 5040

By Email: [Gskelton@welectricity.co.nz](mailto:Gskelton@welectricity.co.nz)

Dear Greg

**Wellington Electricity's Earthquake Readiness Business Case**

Many thanks for sending us the background detail on your plans to improve Wellington Electricity's capability to respond to a major earthquake in the Wellington region.


Capital Coast District Health Board is generally very supportive of any initiatives that will reduce ours, and others exposure to the risk of a major earthquake in Wellington. We share your concerns for the social and commercial hardships that extended outages may bring to our patients and staff. We are also deeply concerned that there is a risk of extended outages that will impact our ability to provide healthcare to those in need when they are most likely to need it, should a major earthquake eventuate.

Whilst we are very supportive, we are concerned that the increased price will add pressure to an already tight fiscal budget. Anything that Wellington Electricity can do to reduce costs in the future would therefore be welcome.

Regards



Thomas Davis  
**GENERAL MANAGER**  
**CORPORATE SERVICES**



# Power supplies to Wellington, the Hutt Valley and Porirua are vulnerable to a major earthquake.

Wellington's electricity network is made up of the power lines and underground cables that deliver power to homes and businesses. It's also the substations and transformers you can see on roadsides. The whole system is normally very reliable as most of it is underground. However, in a big quake about up to a third of the region's consumers could be without power for up to three months. That's why we need to start dealing with the issue and improve our readiness to respond to an earthquake event.

Please send any comment you have on this plan to us at [we\\_CustomerService@welectricity.co.nz](mailto:we_CustomerService@welectricity.co.nz)

More details [www.welectricity.co.nz](http://www.welectricity.co.nz)

**Getting the power back on after a big earthquake**

Wellington Electricity's readiness program

**we<sup>+</sup>**  
\* wellington electricity™

If a 7.5 magnitude quake occurred on the Wellington fault, many roads could be blocked by slips creating up to 7 'islands', slowing down restoring power supplies.

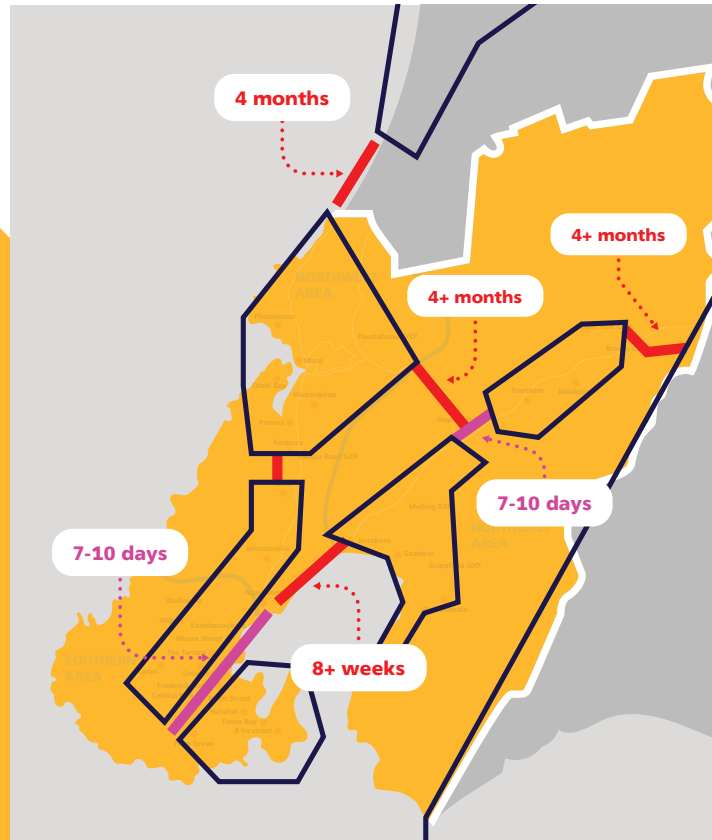
The Kaikoura earthquake a year ago interrupted power supply and was a wake-up call. Wellington Electricity has developed a plan to start dealing with supply restoration time frames.

If we can start power system repairs more quickly after an earthquake, it cuts down the time that people are without power.

So we want to strengthen buildings and put spare parts and equipment in each of these islands, update communication links, and strengthen IT systems so we can get our community restored quickly after a major event.

The work will cost just over \$31 million spread across three years. It would be the first stage in a longer term programme to strengthen power supplies against earthquakes.

Estimation time to restore roads after a big quake



Post Kaikoura earthquake damage



Spare mobile substation to speed up restoration

Wellington Electricity requires approval from the Commerce Commission to recover the cost of these readiness investments.

The impact on customers is estimated at \$1.50-\$1.90 per month on the lines charge for an average residential customer.

Further details of the plan can be found on our website  
[www.welectricity.co.nz](http://www.welectricity.co.nz)