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Our proposed approach to assessing Wellington Electricity's proposal for additional expenditure to improve its resilience and response to a major earthquake

Discussion paper

14 November 2017

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Purpose of this paper

1. This paper explores our proposed approach to evaluating expenditure planned by Wellington Electricity Lines Limited (**WELL**) to improve its network's resilience and ability to respond to a significant earthquake in the Wellington region.

2. For us to provide for funding of this additional expenditure, WELL must apply for a customised price-quality path (**CPP**). We seek your views on our proposed approach to assessing a CPP application from WELL, taking into account the importance and urgency of the issue as highlighted in the recent Government Policy Statement on the resilience of lifeline utilities in the Wellington region.

Increased risk of a major earthquake in Wellington since the Kaikoura earthquakes

3. The November 2016 Kaikoura earthquakes caused extensive damage to the surrounding regions. Wellington escaped major damage but widespread minor damage highlighted the region's vulnerability and that Wellington is not as prepared as it could be for a large earthquake.

4. Since this event Wellington has faced a significantly increased likelihood of a large earthquake occurring.[1] As a result a Government Policy Statement has been issued highlighting the importance that key 'lifeline' utilities in Wellington, including WELL, take action to ensure they are well prepared for such an event.

Identified investment to improve resilience of the WELL network

5. WELL has considered the resilience of its network to a major earthquake based on analysis it has undertaken over the past 2 years and through its ongoing participation in the 2017 Wellington Region resiliency modelling project. This project commenced in response to the Kaikoura earthquakes and required Wellington Lifelines Group members to consider the full interdependencies between lifeline utilities in the region.

6. As a result of this work WELL has identified approximately $31m of expenditure that it could immediately undertake in order to increase its network's resilience to a significant earthquake and enable it to more quickly restore supply to customers faced with outages (resilience expenditure).[2]

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[1] For example, as noted in the cabinet paper supporting the Government Policy Statement on the issue, aftershock forecasts published by GNS in June 2017 for the region extending from Kaiapoi to Wellington indicate a 58 percent probability of one or more magnitude 6.0 to 6.9 events, and a 7 per cent probability of one or more events greater than magnitude 7.0, within a year. While the probability of a large aftershock is decreasing over time, it is still significant. More recent data is available at https://www.geonet.org.nz/earthquake/forecast/

[2] Throughout this paper we use the term 'resilience' to refer to both the resilience of WELL's network to earthquakes, as well its ability to restore electricity supply following an earthquake.

7. As a result of this work WELL has identified approximately $31m of expenditure that it could immediately undertake in order to increase its network's resilience to a significant earthquake and enable it to more quickly restore supply to customers faced with outages (resilience expenditure).

8. The key components of WELL's proposed resilience expenditure are summarised below.

Key features of proposed WELL resilience expenditure

Proposed short term initiatives	Risk being addressed	Estimate
Emergency hardware	WELL intends to purchase emergency hardware that would enable it to repair 33KV cable faults following an earthquake.	$5.4m
Mobile substations and switchboard	New mobile substations would enable WELL to temporarily replace transformers and switchgear lost in an earthquake, enabling it to restore supply more quickly.	$4.7m
Critical emergency spares	Emergency spares would allow WELL to repair 11KV cable faults following an earthquake.	$4.9m
Seismic reinforcement of key sites	WELL plans to accelerate its ongoing seismic reinforcement programme for a number of substation buildings. This programme began in response to changes to the Building Code after the Christchurch earthquakes.	$10.4m
Enhance IT and communication systems	WELL intends to undertake improvements to its IT and communication systems to mitigate the risk of lost communication links.	$5.8m
Total		**$31.2m**

9. WELL will release a more detailed description of the proposed expenditure, in the way of a high-level business case, early in the week commencing 20 November 2017, during our consultation on this paper. The purpose of this document will be to provide additional context and further information on the expenditure proposed by WELL. We will publish this high-level business case on our website.

10. WELL's 2017 asset management plan (**AMP**) also explains that the short-term resilience initiatives could be subsequently enhanced by a larger programme of work to ensure greater diversity of supply into Wellington city and the surrounding suburbs (a project also requiring Transpower investment).[3]

11. WELL considers that this short term expenditure cannot be funded under the revenue allowances we have set for it under its existing default price-quality path (**DPP**).[4] WELL advises that this would affect the quality of service provided to WELL consumers if it reprioritised expenditure from maintenance to resilience.

Government policy statement – government supports additional resilience expenditure

12. Following the Kaikoura earthquakes we have been in discussion with WELL and officials regarding potential ways our price-quality regime could best provide for the additional expenditure needed to address the increased earthquake risk.

13. Our view was that WELL could apply for a CPP to provide for both the short and longer term resilience initiatives.

14. However, WELL has made it clear that it is not in a position to submit a full CPP application (consistent with the relevant rules and requirements) in time to address the immediate concerns arising from the increased earthquake risk. This means that a different option is needed to provide for the additional expenditure.

15. We advised Government that if it considered the additional expenditure was essential and issued a Government Policy Statement (**GPS**) supporting it, we would consider applying the flexibility in our regime to provide for the additional expenditure without undertaking the full CPP process.

16. We consider this is the best available option to provide for this urgent resilience expenditure given the constraints of the DPP and WELL's inability to meet the full requirements for a CPP in the near future.

17. On 18 September 2017, a GPS was issued supporting the additional resilience expenditure by WELL.[5]

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3 In particular, the central city is fed mostly from the Central Park transmission grid exit point with very limited load transfer capability to other GXPs. WELL is making preparations to evaluate the business case for a potential CPP application for investing in these longer term resilience initiatives. See pages 4 and section 5.10.2 of WELL's 2017 AMP.

4 Under Part 4 of the Commerce Act we set a DPP for WELL and 15 other electricity distribution businesses (**EDBs**). The current DPP runs from 1 April 2015 until 30 March 2020. DPPs take a one-size-fits-all approach to setting allowable revenues with limited tailoring for individual EDBs. Where the DPP does not suit a specific EDB's circumstances, it has the opportunity to apply for a CPP, which is tailored for that specific EDB.

5 "Government Policy Statement — Resilience of Electricity Services in the Wellington Region" (21 September 2017) 97 *New Zealand Gazette* at 53.

Government policy statement – key points

- Lifeline utilities should be able to recover reasonable costs arising from their duties under the CDEM Act, to the extent allowed by law. The ability to recover those costs promotes the purposes of both the CDEM Act and Part 4 of the Commerce Act.

- The national significance of Wellington's disaster resilience should be given due consideration by lifeline utilities and by the Commission when performing its functions under Part 4. In particular, the Commission should consider options consistent with the Part 4 purpose which, in respect of regulated suppliers of lifeline services in the Wellington region, will:

  - allow those suppliers to recover prudent, efficient and timely resilience-related expenditure that was not anticipated when existing s 52P price-quality path determinations were made;

  - provide certainty to those suppliers in relation to how any additional prudent, efficient and timely resilience-related expenditure may be recovered, where relevant amendments to a s 52P determination may not be made in advance of that expenditure being incurred; and

  - allow the Commission to consider amending requirements that might normally apply to those suppliers relating to information, verification, or consultation on proposed expenditure.

What is a Government Policy Statement and what does it mean?

18. The Commerce Act requires us to have regard to the economic policies of the Government as transmitted in writing from time to time to the Commission by the Minister (ie, via a GPS).[6]

19. The GPS is not a direction by Government; however we must have regard to it, subject to our overall requirement to promote the long term benefit of consumers under s 52A of the Act.

Our proposed solution – a 'streamlined' CPP

20. We consider that the exceptional circumstances, highlighted in the GPS warrant the extensive use of the flexibility in our regime to allow for a 'streamlined' CPP to ensure that WELL can recover the cost of undertaking this important expenditure as soon as possible.

21. Therefore, we consider that a streamlined CPP is in the long term interests of consumers, as it is the best possible way to ensure that WELL can recover the cost of undertaking this short-term resilience expenditure urgently.

[6] Commerce Act 1986, s 26.

Key features of proposed 'streamlined CPP'

A streamlined CPP would remove many of the usual process and information requirements for a CPP, which would enable WELL to apply for a CPP and have it determined by the end of March 2018.[7] We would consider:

- Removing the requirement for WELL to have its application assessed by an independent verifier. Instead we would assess the application ourselves, relying on our own expert consultants as necessary. WELL will also include a report from an engineer supporting its expenditure, as part of its proposal.

- Modifying or removing the requirement for WELL to consult with consumers on the impact of the additional expenditure. We would consult with consumers ourselves throughout the CPP setting process and require WELL to provide any feedback it has received on this expenditure to date.

- In determining the CPP, focussing our scrutiny only on the additional resilience expenditure. This would limit the size of our task while ensuring the additional resilience expenditure is prudent and efficient. We consider that this would be a proportionate approach in these exceptional circumstances, as the sole driver for the CPP would be this resilience expenditure.

22. In order to implement this approach we would:

22.1 Confirm the, apparently clear, justification for the proposed investment.

22.2 Scrutinise WELL's proposals for additional resilience expenditure to ensure that it has chosen options that are prudent and that reflect efficient costs which have not already been provided for under its existing DPP allowances.

22.3 For the first two years of the CPP we would allow WELL to recover the revenues currently allowed for under its DPP, as well as the cost of the approved additional resilience expenditure.

22.4 We would then build the cost of this expenditure into WELL's price path, without further scrutinising the underlying DPP expenditure. The additional resilience expenditure is unlikely to have strong interdependencies with other expenditure categories or WELL's quality standards, which means we would be able to scrutinise the resilience expenditure in isolation (apart from checks to ensure that the expenditure has not already been provided for). We consider that this approach is proportionate in these unique circumstances.

[7] We must determine WELL's CPP by the end of March 2018, in order for the CPP to take effect in the 2018/2019 regulatory year.

22.5 Because a CPP must be set for a minimum of three years and the DPP only continues for another two years, we would also have to determine an appropriate level of expenditure for the third year of the CPP.[8] We propose to do this using a similar approach to the one we used for the recent gas DPP.[9]

22.6 WELL would move to a revenue cap as its form of control, in line with the new rules for the form of control. This is discussed in more detail in the attachment to this paper.

23. We consider that the very specific circumstances make this approach appropriate and we are unlikely to adopt this approach in the future, unless similar exceptional circumstances were to arise.

24. Given that we would be expressly providing for this incremental resilience expenditure in the WELL's CPP, it may be appropriate to include specific resilience quality standards to ensure that WELL only receive additional revenue if it undertakes this expenditure.

25. We discuss our proposed approach in more detail in the attachment to this paper.

We want to hear and consider your views

26. Before we finalise our approach to dealing with this issue, we want to hear and consider the views of our stakeholders on our proposed approach.

27. Given the tight timeframes required if we decide to evaluate and determine a CPP by the end of March 2018, we ask that we receive emailed submissions by 28 November 2017.

28. We will consider all submissions received by this date before deciding how to proceed.

29. Please email your submission to regulation.branch@comcom.govt.nz with 'Wellington electricity earthquake resilience' in the subject line. All submissions will be published on our website.

8 The current DPP runs from April 2015 until March 2020. The proposed CPP will run from April 2018 until March 2021.

9 The approach we used to set the gas pipeline DPP is discussed in more detail in the attachment to this paper.

Attachment – how could we make a streamlined CPP work?

30. This attachment explains our proposed approach to accommodating a streamlined CPP for WELL. We are seeking your feedback on the design of this approach.

What we are trying to achieve – key elements of the streamlined WELL CPP

31. We consider that the best way to enable WELL to undertake this necessary resilience expenditure is to enable the submission of a 'streamlined' CPP proposal, exempting WELL from many of the usual requirements for submitting and determining CPP. This will require us to temporarily alter the CPP Input methodologies (**IMs**), which are the rules and processes we must follow for submitting, evaluating and determining CPPs.

32. The purpose of undertaking a streamlined CPP process is to allow WELL to recover the cost of short-term incremental resilience expenditure that is not provided for under its current DPP.

33. Our starting point for the streamlined CPP process is:

    33.1 The CPP would start on 1 April 2018 and run for three years, under a revenue cap which will apply for that three year period only, ie, there will be no adjustments in respect of any prior years.[10]

    33.2 We would scrutinise, in detail, the incremental resilience expenditure that WELL is proposing to undertake under the CPP.

    33.3 The rest of the path in the 2018/19 and 2019/20 years will be based on the existing maximum allowable revenue for those years used to set the existing DPP.

    33.4 We would only further scrutinise the 'business as usual' expenditure allowances already provided for in the 2018/19 and 2019/20 years of the DPP to the extent necessary to confirm that the additional resilience expenditure we approve has not already been provided for under them (ie, confirming there is no "double-dipping").

    33.5 We would also need to determine WELL's allowable revenue for the 2020/21 year, ie, beyond the end of the current DPP allowances. Given WELL will not be submitting full forecasts for that year, as would normally be the case under a CPP, we will need to use an alternative approach for this. Our preliminary view is that applying a similar approach to that taken in the recent gas DPP reset (ie, Asset Management Plan based proportionate scrutiny) is appropriate in these circumstances.

[10] Because we are unlikely to determine WELL's CPP until March 2018, WELL may not be able to increase its prices to recover the incremental resilience expenditure until April 2019, as it may not have time to adequately notify its consumers of price increases for April 2018. The revenue cap mechanism would allow WELL to recover the NPV equivalent value of any unrecovered revenue in the 2018/19 year over the remainder of the CPP period.

34. Given that we would be expressly providing for this incremental resilience expenditure in WELL's CPP, it may be appropriate to include specific resilience quality requirements to ensure that WELL would only receive the additional revenue if it undertakes this expenditure. We seek your views on ways that we could do this.

35. The regime provides scope for us to modify and vary the IMs, to allow us to accept, evaluate and determine a streamlined CPP proposal as detailed above. We propose to use this flexibility in our regime to modify and vary the IMs to allow for this approach.

What flexibility is available to alter the IMs?

36. The table below sets out the two ways we can alter the CPP IMs without making a permanent amendment.

Modification and exemption provisions
• Clause 5.1.6 of the IMs allows us to pre-approve modifications to, or exemptions from, CPP information and process requirements (also contained in the IMs). These provisions were introduced as part of the 2016 IM review. • Prior to an application, a CPP applicant can request us to modify or dispense with any requirement in subparts 1, 4, or 5 of the CPP IMs for the purposes of making a CPP application. These subparts set out the required information for a CPP application and the process that a CPP applicant must follow (including the requirements for verification, consumer consultation, and audit). • We may then approve the request where it does not detract in a way that is more than minor from our evaluation or determination of the CPP proposal, or the ability of interested persons to consider and provide their views on it. • We can also attach any condition or additional requirement to an exemption or modification made under the methodology.
Variations to the IMs under s 53V of the Commerce Act
• Section 53V of the Act allows us to vary the IMs when determining a CPP, if the applicant agrees: (1) The Commission may determine any customised price-quality path that the Commission considers appropriate for a supplier that has made a proposal. (2) To avoid doubt, and without limitation, in determining a customised price-quality path that complies with section 53M the Commission may do any of the following: … (c) with the agreement of the supplier vary an input methodology that would otherwise apply to the supplier. • These variations are temporary and only apply to the CPP applicant for the duration of the CPP period. • We may only finalise an IM variation after the CPP proposal has been made by the applicant.

37. We propose to primarily use these mechanisms to give effect to our proposed streamlined CPP detailed above.

How we would use this flexibility to change the IMs

Use of modifications and exemptions

38. In order to implement a streamlined CPP process, we propose to exempt WELL from the information requirements for CPPs apart from the limited information we would need to determine a streamlined CPP.

39. The information that we would require would likely include:

    39.1 a brief document providing an overview of the proposal;

    39.2 the business cases for the resilience expenditure and any associated models;

    39.3 WELL's latest AMP;

    39.4 a financial model for the CPP period;

    39.5 a summary of feedback from any consumer consultation undertaken;

    39.6 director's certification of the proposal;

    39.7 a limited scope audit report; and

    39.8 any proposed variations to the input methodologies for determining the CPP.

40. We would have the ability to request further information after the CPP proposal was submitted using our information gathering powers.[11] We would expect to request further information for the proposed expenditure for the third year of the CPP.

41. We propose to also modify the requirements for WELL to undertake verification, audit and consumer consultation.

    41.1 We propose to remove the requirement for WELL to undertake verification. Instead we will use our own experts to verify the CPP application after it has been submitted. WELL will also provide an engineer's report supporting the resilience expenditure as part of its application.

    41.2 We propose to modify the audit requirements for WELL's CPP proposal to ensure that it can be submitted urgently. This would include limiting the scope of the audit.

    41.3 We propose to require WELL to provide a summary of feedback from any consultation that it has undertaken, but would not require any specific consultation. Instead we would consult with consumers ourselves on the proposed expenditure.

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[11] Under s 53ZB and s 98 of the Commerce Act 1986.

42. Although we may exempt WELL from its formal consultation obligations, consumers would still have at least three opportunities to have their say on the streamlined CPP, including what the process would look like, the IM variations, and whether further information is needed to evaluate the CPP proposal. This includes:

    42.1 consultation on our proposal to undertake a streamlined CPP process, ie, this paper;

    42.2 initial consultation on WELL's CPP proposal (as part of this consultation, consumers will be able to see any modifications and exemptions that we have agreed with WELL, and ask us to request further information from WELL if needed); and

    42.3 consultation on our draft CPP decision, including variations to the IMs.

43. We do not think that modifying the IMs in this way will detract, in a way that is more than minor, from our ability to evaluate and determine the CPP or for interested persons to provide input. This is because, in these exceptional circumstances, our evaluation and determination of the CPP will focus primarily on the additional resilience expenditure.

44. Requiring additional information on the expenditure already provided for under the DPP would mean that WELL would not be able to submit a CPP application in time to address the need for the short-term resilience expenditure. We will still require the full business cases for this resilience expenditure which will form the basis for our evaluation.

Use of variations to the IMs

45. We would also need to vary the IMs relating to the determination of the price path. Our expectation is that WELL will propose these variations as part of its CPP proposal.

46. The types of variations we are likely to require include:

    46.1 changing the IMs to allow for a three year price path and a different approach to building the price path; and

    46.2 potentially some other changes to deal with implementation issues (such as the application of the incremental rolling incentive scheme).

47. We would consult on these variations as part of our draft CPP decision.

WELL will move to a revenue cap for the CPP

48. WELL is subject to a weighted average price cap (**WAPC**), as its form of control, under the DPP. Under a WAPC supplier revenue is exposed to differences between forecast and actual demand.

49. Under the DPP WELL is currently recovering less than expected when we set the DPP, due to outturn demand being less than forecast when we set the DPP.

50. As part of our IM review last year, we decided that a revenue cap was a more appropriate form of control for EDBs as it would remove this forecasting risk for suppliers.

51. As part of the move to a CPP WELL would move from a WAPC to a revenue cap, under the new IMs. WELL estimates that the impact of moving to a revenue cap will be an increase in the actual revenue recovered from consumers of $1m in the 2018/19 regulatory year and $2m in the 2019/20 regulatory year.

How we will forecast the third year of the CPP?

52. We would need to determine WELL's allowable revenue for the 2020/21 year, which is beyond the end of the current DPP allowances. This means that we will not be able to use the DPP allowances as the base for setting WELL's revenue allowance for this year.

53. WELL would not be able put together the full suite of information for that year that we would usually require for a CPP application, in the short timeframe required. This means that we would need to use a different methodology than we would usually use under a CPP to determine appropriate levels of expenditure.

54. At this point we consider that applying a similar approach to that taken in the recent gas DPP reset may be appropriate. For the gas DPP we started by analysing the businesses' AMPs and then applied a further scrutiny to any expenditure that was not consistent with what we expect to be 'business-as-usual'.

Gas DPP – high-level approach to setting expenditure

For the recent gas DPP we sought to assess whether the suppliers' forecasts reflected the efficient costs that a prudent supplier would require to meet or manage expected levels of service over both the regulatory period and the longer term, and to comply with applicable regulatory obligations.

To do this we:

- assessed the extent to which a supplier's forecast expenditure (both in aggregate and at category level) represents an increase over that supplier's historic levels of expenditure;
- engaged consultants to provide advice on the extent to which the supplier's forecast expenditure is justified in its asset management plan, where the supplier's expenditure forecasts were substantially above historic levels; and
- sought additional information from suppliers where their AMPs did not sufficiently justify increases in expenditure.

Where we were not able to satisfy ourselves that a supplier's forecasts represented prudent and efficient expenditure necessary to meet service standards, we replaced its forecasts with 'fall back' forecasts based on its historic costs.

55. This approach is canvassed in much more detail in the gas pipeline businesses DPP reasons paper.[12]

56. While we consider that this approach is likely to be appropriate for capex, for opex we consider that a base- and-trend approach for opex is likely to be more appropriate.[13]

57. We would then use these expenditure forecasts to build the allowable revenue for the third year of the CPP using a simple building blocks approach.[14]

We will create a new submission window for WELL's CPP application

58. CPP applications are only able to be made in specific windows set out in the DPP determination. The CPP windows are intended to allow us to prioritise CPPs when more than three are received in a given year.

59. There are currently no further application windows this year.

60. We would amend the DPP determination in order to allow WELL to submit its CPP outside of the usual windows, probably in late November or early December. We do not consider that this is a material change, given that we are not expecting any CPPs, apart from Powerco's, this year. As a result we do not consider it necessary consult further on this proposed change.

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[12] Commerce Commission "Default price-quality paths for gas pipeline businesses from 1 October 2017 – Final reasons paper", Chapter 4, available at: http://comcom.govt.nz/dmsdocument/15481

[13] At a high-level, a base-and-trend approach to forecasting opex involves determining a historical base year, and applying trends to the operating expenditure in that year to account for certain factors such as cost escalation.

[14] Building blocks approach uses the forecasts of various costs to a business, in order to determine the appropriate revenue for that business.