wellington electricity™

DPP3 reopener application – Disaster recovery service relocation

February 2024

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1 Purpose

Wellington Electricity Lines Limited (WELL) is seeking to reopen its DPP to provide for an unforeseeable major capex project – specifically, the relocation of its primary data centre, back-up control room, and disaster recovery services from the Haywards Transpower GXP to a new building in Takapu Rise, Tawa. WELL's distribution assets relating to the Haywards GXP also have to be relocated within the Haywards complex so Transpower can demolish and repurpose the current location for transmission grid equipment. This application refers to the relocation of these services collectively as DR Services and the project as DR Relocation.

WELL has a license agreement for shared occupancy of a building within the Transpower substation at Haywards which has been used since 1985 for EDB DR services. Transpower is planning the demolition of the building to make way for their substation expansion and in late February 2022 gave WELL 12 months' notice to leave the site. Transpower had not previously signalled its intent to end the tenancy agreement, and WELL was not included in the Transpower project planning process. Management has negotiated a new exit date of 24 July 2024. Transpower are unable to extend the exit date any further so the new investment is required within the current DPP period which requires WELL to apply for additional regulatory allowances.

The DR Services provide essential distribution services that allow WELL to provide business continuity, a backup network control centre and a primary Data Centre to allow the redundancy for Wellington customers to have a resilient EDB service. Without the continued provision of these services from an alternate site, WELL would be unable to perform effectively as a lifeline utility and could not provide service levels that meet customer expectations, and the quality of supply would become negatively impacted. The $8m cost of relocating these services represents approximately 20% of WELL's annual capex allowance. The importance of this investment and the number of additional large customer projects requiring completion this year has meant we don't have the opportunity to reschedule other capital work in our programme without impacting business resilience or customer service.

This application is made under Subpart 5, Clause 4.5.5A Unforeseeable major capex project, of the Electricity Distribution Services Input Methodologies Determination 2012. WELL was not aware of this project when it provided the 2020 AMP forecast for the DPP3 capex allowance calculation. The application is for ~$8m of additional capex to be added to WELL's regulatory allowances in the regulatory year ending 31 March 2025.

The investment is not large enough to justify a CPP application and a single project CPP is not available under the current input methodologies.

This application will demonstrate that this investment fits the unforeseen reopener criteria for relocation capex. This application will demonstrate that this investment fits the unforeseen reopener criteria for relocation capex.

The following documents have been provided to support this draft application.

Figure 1 – supporting documents

Document	Purpose	Location
Notice to exit Haywards	Confirming original notice to exit the Haywards site and the need to relocate services	Appendix A of this application
Letter from Transpower	Confirming that WELL must exit the site by 24th July 2024, before the start of the next regulatory Appendix B also provides the lease terms.	Appendix B of this application

1.1 Project timetable

Figure 2 provides the high-level project timetable. Given the short timeframes and the long build times for a new building, WELL has started implementation, purchasing land and commencing the build.

Figure 2 – project timetable

Project step	Delivery date
Options analysis and site selection	Jul 2023
Land purchase and build contract agreed	Nov 2023
Negotiating extended terms with Transpower	Mar 2023
Seismic design for both the land and building	Mar 2023
Build started	May 2023
Reopener application submitted to Commission	Feb 2024
Reopener approved and DPP3 reopened	Jun 2024
Build and fit out complete, assets commissioned, and services live	July 2024

2 Relocation of services

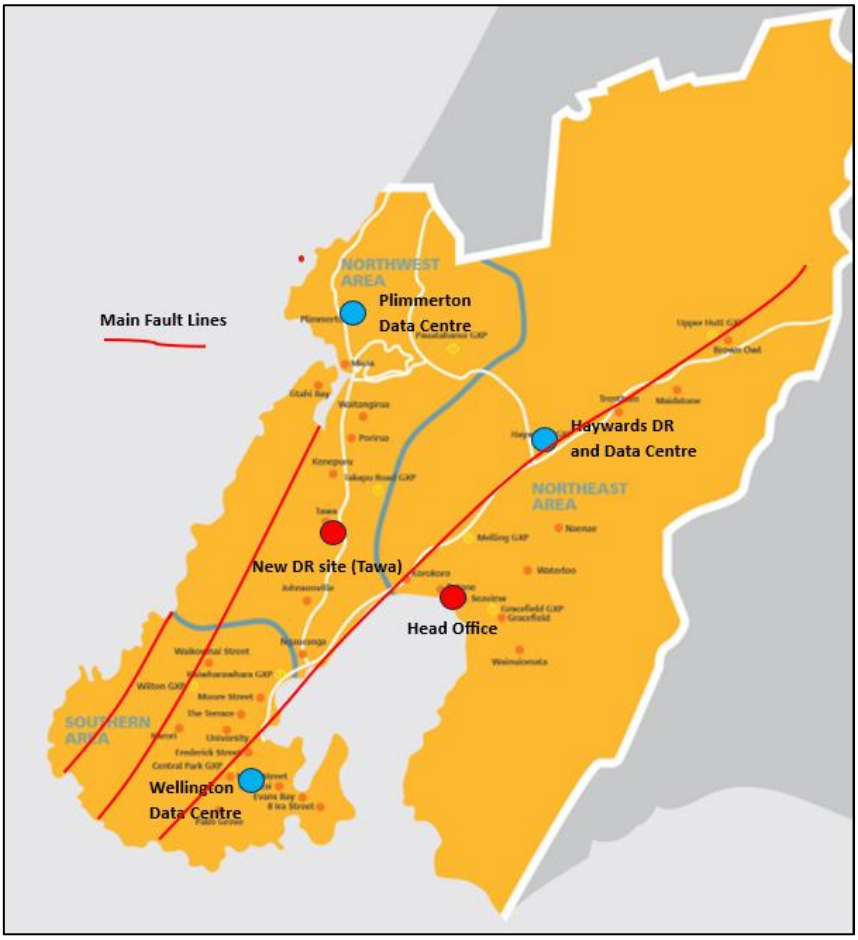
The selection of the site for the DR services is dependent on its diversity from the location of WELL's main operational site in Petone i.e. they are not in the same region, or near the same coast or on the same fault line.

The WELL network is divided into three main regions being Southern Area (Wellington City), the Northeast (Hutt Valley and the Northwest regions as shown in Figure 3, with the major fault lines superimposed.

Figure 3 also shows the location of WELL's head office, current DR site at the Haywards, three data centres and the proposed new DR centre site in Takapu Rise near Tawa. The location of the new DR centre should be in the Northwest because:

1. Wellington City is highly condensed so this should be avoided as a DR centre as access could be limited after an event such as a major earthquake, and
2. The current head office is in the Hutt Valley and the future head office location is most likely to also be in the Hutt Valley because this is where the majority of staff live and has good transport links.

Figure 3 – Wellington seismic regions and location of new DR site



2.1 Other solutions considered

Four potential sites were identified and evaluated – these sites represented all of the long-term lease or buy options available in the area. The Takapu rise site was the most cost-effective option of the two sites that were not exposed to slipping or flood risks.

Figure 4 – site evaluation

Location	Seismic rating (IL4)	Flood/slip risk	Lease	Transport links	Comms links	Special consent	Cost (ranked)
Takapu Rise	100%	Low	Long term	Yes	Yes	No	2
Grenada	100%	Low	Long term	Yes	No	No	3

Location	Seismic rating (IL4)	Flood/slip risk	Lease	Transport links	Comms links	Special consent	Cost (ranked)
Wilton	80%	Medium	Short term	No	Yes	Yes	1
Tawa	100%	Medium	Long term	Yes	Yes	No	3

WELL also considered whether to lease or own the site. Given the importance of retaining a long-term service and maintaining a consistent security standard, WELL has decided to own the site, removing the risk of unexpected relocation of essential services.

2.1.1 Cloud based options for the data centre

Cloud based solutions were also considered for the data centre part of the service being relocated. For critical systems WELL has the approach of directly controlling data storage and avoids relying on external providers. For this reason, WELL owns and operate its own data storage for SCADA, communications and other critical applications.

3 Reopener criteria

Figure 5 demonstrates that the relevant unforeseeable major capex project criteria have been met.

Figure 5 – Assessment of the unforeseeable major capex project criteria

Criteria	Assessment	Supporting evidence
Input Methodology clause 4.5.5A Unforeseeable major capex		
(a-d) primary driver	(c) Asset relocation The project described in section 2 of this application fits the IM description of an asset relocation – i.e **asset relocation capex means capex on assets involving the relocation of those assets at the request of a relocation party, including, but not limited to, relocation for the purpose of allowing road widening or undergrounding of previously above ground assets**; Where • the proposed expenditure is for the relocation of WELL's disaster recovery site and primary data centre services from the existing Transpower Haywards site to a new purpose-built site. • The relocation capex includes the relocation of some disaster recovery and primary data centre equipment, the replacement of equipment that can't be relocated and a new building to host the functions. • The decision to relocate these services was out of WELL's control. The timing of the relocation was also out of WELL's control – the relocation of the	See the technical project description provided in Section 2 A copy of the Transpower notice to exit the current site is provided in Appendix A.

Criteria	Assessment	Supporting evidence
	service could not be delayed until the next regulatory period. • The capex is at the request of a relocating party, the request being Transpower's notice to exit the current site. • The Relocating party being the current landlord, Transpower	
(e) DPP3 capex forecast did not include this project	The 2020 AMP relocation forecast, used to calculate DPP3 capex allowances, was based on historic expenditure extrapolated forward with known large connections added on to the base forecast. This project was not included – WELL did not know about the project in 2020 when the capex forecast was produced.	See section 3.2
(f) Reasonable not to have included it	WELL did not know that Transpower would notify WELL that it had to exit the current DR site at time of the 2020 AMP capex forecast finalisation. See the Transpower letter dated 24 February 2022 giving notice for WELL to exit the current Haywoods site.	See Appendix A for the letter notifying WELL that it must exit the Haywoods site.
(g) Sufficient for circumstances and in accordance with contribution policy	This investment falls outside of the Customer Capital Contribution Policy. Transpower has no contractual obligation under the terms of the current lease agreement to fund any part of the relocation costs. No contribution will be made by Transpower.	The relevant lease terms are provided in Appendix B.
(h) Material value	The ~$8m project cost exceeds the $2m reopener minimum	See section 4
(i) Customer confirmation	Appendix B provides a letter from Transpower confirming that they require us to exit our current Disaster Recovery site at the Haywoods and that the exit date cannot be delayed until the next regulatory period.	See Appendix B
(j-l) Prudent investment	The investment is prudent because: (1) the solution selected provides the best long-term benefits to consumers, *and* Section 2.1 provides alternative options considered, demonstrating the selected option was the lowest long-term cost option for sites available in the selected seismic zone. (2) The cost for the selected solution reflects market rates Section 4.1 provide the methodology used to determine the project cost reflects market prices. Where possible, as much of the existing equipment will be moved.	Section 2.1 provides alternative options considered, and why the proposed solution was selected. Section 4.1 provide the methodology to determine the project cost reflects market prices

DPP3 reopener application – relocation of primary datacenter, back-up control room, and disaster recovery services

Criteria	Assessment	Supporting evidence
(m) Apportionment of future revenues	The relocation cost will be added to the regulatory asset base (RAB) and funded by network tariffs. It is estimated that the investment will have a 0.3% impact on network tariffs, assuming all other inputs to the tariff-setting process remain constant.	Section 5 provides the customer impact calculation.
Input Methodology clause 4.5.6 When price-quality paths may be reconsidered		
(4) Reopener applications must not exceed $30m is a disclosure year	WELL has combined three applications to streamline the consultation and reopening process. These are WELL's first applications and they total ~10m, less than the annual $30m threshold.	Section 4 provides the project cost and the commissioning date.
(5) (a) – show that customer contributions have not been included in allowance calculation	No customer capital contributions	n/a
(5) (b) – show that any amount relating to the project already included in the DPP allowances is not included	The project was not included in the 2020 capex forecast that the DPP3 allowance calculation was based on.	Section 3.2
Input Methodology clause 4.5.7 Amending price-quality path after reconsideration		
(3) – only includes costs that reflect an efficient cost	The project cost reflects an efficient cost because the: • Lowest cost build available in the seismic zone selected • Equipment purchased by tender ensuring market rates • Equipment is re-purposed where possible	Section 4.1 provides the methodology used to ensure the cost reflects an efficient cost.

3.1 Other criteria

The recent Input Methodology Review Reopener workshop suggested other criteria, not included or are not explicit in the current IMs. We thought the additional criteria would be useful for the Commission assessment. Figure 6 provides the workshop criteria not already covered by the IMs and our assessment against those criteria.

Figure 6 – Assessment against the

Criteria	Assessment	Supporting evidence
Justifiable urgency	The Disaster Recovery site (including the backup control room) and primary data storage are essential components to providing electricity distribution services. Delaying this investment until the DPP4 allowances are awarded in 2025 would mean that WELL could not continue to provide services at the expected levels of quality and resilience.	n/a

DPP3 reopener application – relocation of primary datacenter, back-up control room, and disaster recovery services

Criteria	Assessment	Supporting evidence
A demonstration by the applicant of any consumer consultation	Relying on the Commission's consultation phase.	n/a
Whether an EDB has considered reprioritisation of its DPP/CPP expenditure allowance	The large value of the new connection means that other projects cannot be sensibly reprioritised. The ~$8m project value is equivalent to 20% of the annual capex allowance. Also note, there are a number of other unforeseen, emission reduction-related projects that WELL is also having to fit within its programme. Other unforeseen programmes include various accelerated network reinforcement projects (see the 2023 AMP) and mandatory upgrade of WELL GXP load monitoring equipment ($2-3m for the Electricity Authority's AUFLS project).	n/a
The extent to which there could be 'fast-track' amendments	This project benefits all Wellington Customers and will increase future tariffs. We don't think that extensive customer consultation is needed.	n/a

3.2 Confirmation the project not included in DPP3 allowance

The 2020 AMP capex forecast was used to calculate WELL's DPP3 capex allowances[1]. WELL forecast relocation capex was based on historic costs extrapolated forward. Significant new relocations would then be added onto the base forecast. WELL was not aware of any near certain, significant new relocations, at the time the capex forecast was submitted. Figure 7 provides the 2020 AMP Information Disclosure relocation capex forecast that the DPP3 was based on. The figure shows that only a historic level of relocation expenditure was expected at the time – there is no additional capex forecast for a large new relocations. The figure provides the last four DPP3 regulatory periods that were applicable to WELL (WELL moved from a CPP to the DPP3 in second year of the DPP3 regulatory period).

Figure 7 – 2020 AMP Relocation capex forecast (constant $)

Regulatory period ending	31 Mar 22	31 Mar 23	31 Mar 24	31 Mar 25
Relocation Capex	720	728	735	750

4 Project cost

4.1 Services being relocated

Three core functions are currently provided from the Haywards site and will be relocated to the new Takapu Rise site. The Distribution GXP connection assets will continue to be provided at a different

[1] WELL's DPP3 allowances were calculated one year after other networks, using a later version of the AMP forecast, as WELL transitioned from its CPP to the DPP3 in the second year of the DPP3.

location within the Haywards complex. Figure 8 describes each of these services and provides their future location.

Figure 8 - services and assets being relocated.

Current service provided from the Haywards	Service description	Future site
Primary datacenter	Datacenter for all of WELL's corporate and network IT functions including SCADA, load management and GIS.	Takapu Rise
Back-up control room	WELL's backup control room, provides a secondary location for the control and management of the Wellington network.	Takapu Rise
Disaster recovery services	Secondary site for Wellington's wider network management and core back-office functions. WELL's disaster recovery strategy is to host core support services from the DR site if the main office becomes uninhabitable or when a pandemic response required isolation procedures.	Takapu Rise
Distribution assets relating to the Haywards GXP	The distribution assets connected to the Haywards GXP also require relocation to allow Transpower to decommission this building. These will remain as connection assets and moved to another location within the Haywards GXP.	New Haywards location

4.2 Service relocation workstreams

There are five workstreams. These have been sequenced to maintain service continuity of these essential services. Progress on each workstream is summarised as:

Workstream one: Purchase of land and building at Takapu Rise.

Workstream two: Fit out of the new building at Takapu rise. We have been working with the property developer and engineers to ensure the building and the site will meet our requirements for earthquake resilience. In early March we completed the seismic design for both the land and building that will deliver an IL4 site. Construction is now underway.

Workstream Three: Providing communications to the Takapu Site, including Remote Terminal Units (RTUs) to provide telemetry data and remote-control functions for primary assets. RTU's are constantly updated due to site changes and must be configured and tested off-line. A climate-controlled environment is required of the primary data services.

The relocation of communication services also includes an analogy to digital conversion for ATU equipment. The Haywards site, due to its age, has both copper (analogue) and fibre optic (digital) communications systems. This has enabled us to maintain analogue RTUs at a number of sites. The move to a new site means we will have a digital only network and therefore must convert our analogue sites to digital.

Workstream four: Relocation of equipment from Haywards to Takapu Rise. This workstream is primarily dealing with data centre servers. WELL data centre at Haywards is our primary data site with

a backup at the Petone office and other data backup sites. A full scoping report has been developed to identify what servers can be moved and which need to be replaced or replicated.

Workstream five: Relocation of equipment to other parts of Hayward substation. There are a number of items within the Haywards building that are part of our distribution service assets that connect to the Haywards GXP and must remain at Haywards. Planning is progressing and has identified and agreed new locations for this equipment within the Haywards site. Movement of this equipment requires engineering design and careful project planning with Transpower, which is currently underway.

The project costs associated to each workstream are provided in figure 9.

Figure 9 – project cost

Workstream number	Workstream	Cost	Value ($)
Workstream one	Purchase of land & building	Cost of the land & building	**3,195,000**
Workstream two	Establishment	Building design & base fitout	741,463
		Server & control room build	1,441,000
		Other Build costs	275,302
			2,457,765
Workstream three	Takapu Rise communications	Remote terminal units	100,000
		Primary internet access (Vocus)	120,000
		Secondary internet access (Vodafone)	90,000
		Microwave based back up Internet access	75,000
			385,000
Workstream four	Takapu Rise equipment relocation	Control Room, including SCADA work stations	150,000
		Relocation of SCADA	200,000
		GIS hosting	10,000
		Scada hosting	10,000
		Load management hosting	10,000
		Billing system hosting	10,000
		Drawing system hosting	10,000
		Relay management system hosting	10,000
		Austrian service gateway (CHED)	50,000
		Corporate network & servers	30,000
		Back up servers	10,000
		Outage assessment system hosting	10,000
		DR office	10,000
		Temporary DR office in Newtown	150,000
		Project management supervision & commissioning	160,500
			830,500
Workstream five	Relocation within Haywards	Distribution services relating to GXP	**1,125,200**
Total project value			**7,993,465**

5 Cost efficiency

5.1 Building and fit out

The land and building were purchased at market prices through a commercial negotiation. The per-meter rates were similar to or less than prices being offered in other locations. Align Consulting led the negotiation and market comparison for WELL.

As highlighted in section 2.1, there was no option to stay in the current site. Alternative sites were offered by Transpower but they did not meet building standards or location stability requirements. Of the four available sites, the selected site was the second least expensive overall, but the least expensive of the sites that were available for a long-term lease had the appropriate seismic rating and were low slip and flood risks. Figure 10 compares the land costs of the sites available for sites that meet lease, seismic, flood and slip expectations.

Figure 10 – comparison of land costs

Location	Seismic rating (IL4)	Flood/slip risk	Lease	Cost
Takapu Rise	100%	Low	Long term	$3.2m
Grenada	100%	Low	Long term	$3.7m

The fit out was a sole source contract using the site contractor. This avoided establishment costs and shared site costs with other tenant fit outs.

5.2 Equipment

Where possible, and where existing equipment complied with the IT architecture of the relocated service, we have reused equipment to minimise costs. Figure 11 provides a summary of whether we have reused existing equipment, and the reason we have purchased new equipment if equipment can't be reused.

Figure 11 – reusing or purchasing new equipment

Equipment	Reused or purchased new	Explanation
Land, building and fit out	New	Existing land, building and fit out can't be used
Distribution assets relating to the Haywards GXP	Relocated (mostly)	Some assets in this workstream will be relocated eg batteries, battery chargers, relays etc. Some secondary items will be replaced eg router switches as network must remain operational throughout the transition.
Takapu Rise communication equipment and equipment store (including internet access, secondary internet access and microwave backup)	New	Remote Terminal Units are analog technology and will not work in new location (new equipment is digital). New communication links build for Takapu rise, old equipment cannot be used.
Primary data store (various software platforms)	Relocated	Services and equipment can mostly be reused.
Australia gateways and primary SCADA platform	New	Relocation aligned with lifecycle replacement.

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Equipment	Reused or purchased new	Explanation
Distribution assets relating to the Haywards GXP	Relocated (mostly)	Most primary assets in this workstream will be relocated e.g. batteries, battery chargers, relays etc. Some secondary items will be replaced e.g. router switches as the network must remain operational throughout the transition.

New equipment, including electrical equipment, communications equipment and IT equipment, will be procured by tender. This ensured market prices. WELL's internal IT team will procure IT and communications equipment. Electrical equipment will be procured by Align consulting.

6 Impact on future network tariffs

This project will increase tariff revenue by approximately $380k or 0.3% (measured as the increase in revenue that is recovered from customers by network tariffs).

This has been calculated using the Commission's Financial model for Wellington Electricity CPP to DPP transition. The increase in revenue is calculated by adding the project $8m value to the 2023/24 Commissioned assets and measuring the change in BBAR before tax for the 23024/25 regulatory year. Current rental costs ($40k p.a.) were then taken off the change in BBAR. The percentage change is calculated as the revenue change ($380k) as a proportion of Forecast Net Allowable Revenue provided by WELL's Price Setting Compliance Statement (which is $146m).

7 Next steps and closing

Thank you for taking the time to consider this reopener application. Please don't hesitate to ask any questions you might have [redacted]