12 July 2024

Ben Woodham
Electricity Distribution Manager
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Tēnā koe Ben,

Powerco's revised OPEX step-change request for 3 steps not approved in the DDP4 draft decision

Powerco has reviewed its step-change applications in response to the Commission's draft decision. While we are disappointed with relatively low rate of step-change approvals, we accept the Commission's conclusion that the magnitude of step-changes requested justifies a CPP application.

Anticipating the rate of change in the energy system and our customers' adoption of DER and other technologies is challenging and creates significant uncertainty in the timing for our investments and resource requirements. We are concerned about responding too slowly because it could hamper our customers' ability to readily adopt DER. We are equally concerned about our customers incurring costs because of providing capability earlier than necessary.

We think a balanced solution is to defer work in some areas and focus on no-regrets activities. This approach will allow us to gather customer insights and develop a clear pathway and business case to support a robust CPP application if it becomes clear that this would benefit our customers.

We have reviewed the step changes that have been accepted in the draft decision and the extent to which the draft decision's trend allowances have addressed the anticipated funding gaps. We have also considered the Commission's feedback in the draft decision around balancing incentives to invest, ensuring high quality outcomes for customers and the purpose of the DPP. Taking this into account, and assessing the remaining funding gap from a targeted no-regrets perspective, we have repositioned three step change applications which we believe are in customers best interest to approve and are aligned to the DPP4 decision-making framework as follows:

Step Change	Description	DPP4 total[1]
LV monitoring and smart meter data	This is a new application for a subset of the previously presented step-change: "Workforce requirements - Electricity Capability (additional capability in data, digital and future networks)"	$1.9m
Electricity graduate programme	This is an updated application, with additional supporting evidence to justify the need, and a reduced cost (was $9.1m).	$5.6m
Increase in capability required to meet changes in	This is a new application for an amended subset of the previously presented step-change: "Workforce requirements -	$7.1m

[1] In 2024 constant prices

customer expectations and technological change	Electricity Capability (additional capability in data, digital and future networks)"

The total value of these proposed steps is $14.6m which represents 2.3% of the total opex and would bring the total approved steps to $31.3m, still within the aggregate 5% cap applied in the Step-change framework.

The attached report provides details and assessment of the three proposed steps.

Yours sincerely,

Stuart Dickson
General Manager - Customer
POWERCO

Powerco OPEX step-change request

Powerco Response to DPP4 Draft Decision

12 July 2024

POWERCO

Contents

1. Implementing LV monitoring and smart meter data with the staff to undertake analysis

1.1 Description

As part of the DPP4 draft decision, the Commerce Commission has approved an opex step change for the purchase and storage of LV monitoring and smart meter data for Powerco. This does not include an additional step change due to increase in capability to utilise and analyse data and capacity (engineers, planners) to support the increasing amounts of DER on our network.

We are requesting that the costs of additional staff for undertaking and applying LV data analysis are included in the already approved step change. Without additional staff, we will struggle to make the best use of the data for DPP4 and deliver on the benefits that LV monitoring and smart meter data can deliver, such as optimisation of DER on our network. The following sets out our assessment of the step change in costs for additional staff to undertake analysis against the Commissions DPP4 draft decision criteria.

Table 1 provides our assessment against the step change criteria and in Table 2 we set out the breakdown of annual step changes and a description of the specific roles.

1.2 Assessment of the step change criteria

Table 1 Assessment of criteria

Decision-making factor	Supporting Evidence
Significant	The costs associated with accessing LV data, procuring software for storage and analysis, and additional staff to assess and apply the analysis are significant enough to justify evaluating this step change.[2] Total opex step change over DPP4 period $1.9m Total FTE count 5
Adequately justified with reasonable evidence in the circumstances	The increase in workforce we are requesting are a combination of roles required to: • Use LV monitoring data • Operate an LV network. Without additional staff, we won't be able to utilise the data and deliver on the benefits LV monitoring and smart meter data can deliver (e.g. optimization of DER on our network). In order to determine the number of FTEs we have worked within the business to inform what roles we require to meet our strategic objectives and deliver on our work programmes. Annual salary costs are based on job match data to support remuneration evaluation. The job match data is based on salary survey information from across New Zealand and has been matched by internal subject matter experts across the business.

[2] Commerce Commission, Default price quality path for electricity distribution businesses from 1 April 2025 Draft reasons paper, 29 May 2024, at C124

<table>
<tr><th>Decision-making factor</th><th>Supporting Evidence</th></tr>
<tr><td></td><td>
<table>
<tr><th>Role</th><th>Reason required</th><th>FTE</th><th>Total cost over DPP4</th></tr>
<tr><td>LV / DER engineers</td><td>Ensure LV DG connections are managed, monitored and plan for load increases on the LV network and make best use of increasing amounts of DER on the network</td><td>4</td><td>$1,239,000</td></tr>
<tr><td>Data quality LV analyst</td><td>Support ongoing data quality efforts to improve LV network understanding, using smart meter data to update and correct LV connectivity and phasing</td><td>1</td><td>$644,000</td></tr>
<tr><td></td><td>Totals</td><td>5</td><td>$1,883,000</td></tr>
</table>
</td></tr>
<tr><td>Not included elsewhere in the expenditure allowance</td><td>Step change: We have been awarded a step change for the purchase and storage of LV data. However, this approved step excludes the resources and capabilities needed to use and analyse the data.

Base year: As this is a new activity and expense, we haven't started on yet, it is not included in our base year.

Trend: The scale trends are based on historical relationships which do not account for growth as the result of undertaking LV related activities, as they are new and do not move in line with ICP growth, capex investment or line length. But rather they are the result of emerging technology and change in customer preferences.

Cost escalators: Not included in the base year so it is not captured by the cost inflator.</td></tr>
<tr><td>Have a driver outside the control of a prudent and efficient supplier</td><td>The evolution of the electricity sector towards flexibility services and DERs is clearly outside the control of the EDB.

Access to LV data is crucial for EDBs. The driver is clearly outside the control of EDBs, and a prudent and efficient EDB would spend to support flexible solutions and demand-side management in the future.[3]

The Commission must also incentivise investment in demand-side management as part of its 54Q objectives. This includes employing additional staff to give us the capability and capacity for increased control and optimisation of DER on our network.</td></tr>
</table>

[3] Commerce Commission, default price quality path for electricity distribution businesses from 1 April 2025 Draft reasons paper, 29 May 2024, at C127

Decision-making factor	Supporting Evidence
Be widely applicable	The Commission has already accepted step changes for LV data acquisition and storage, it is reasonable to expect that EDBs will also require increased capability and resources to analyse and utilise this data. The Commission has approved LV monitoring and smart meter data step change for a number of EDBs already (including for staff) and this is generally applicable to all EDBs.

Table 2 Description of roles and timing of step

Role	Role Description	Justification	Additional FTEs					Cost				
			FY26	FY27	FY28	FY29	FY30	FY26	FY27	FY28	FY29	FY30
LV / DER engineers	New role - Plan for the growth and security of our LV networks, and enable increasing amounts of DER/DG connection at the LV level.	With the increasing amounts of LV connected DG (particularly solar), increasing electric vehicle charging, and the likely growing use of home energy storage and energy management solutions, the way we plan and operate our LV networks will need to evolve. If we don't either customers will not be impacted through poor LV reliability or an inability to use the network, or via inefficient LV upgrades. These LV/DER engineers are intended to support a new way of planning for our LV networks, using new planning tools and data fed from our DSO programmes. They will ensure LV DG connections are managed, monitor and plan for load increases on the LV network, and look to make best use of the increasing amount of DER on the network.			2	2				$ 247,800	$ 247,800	
Data Quality LV Roles	New roles - data quality	Similar to other LV related roles, the management of our LV network is evolving to support changing customer expectations and increasing use of DER. Key to the planning and operation of the LV network and DSO is good quality data. These additional roles will support ongoing data quality efforts to improve the understanding of our LV network to levels similar to that of our HV network. This will allow us to enable customer choice is regards to how the connect their DER and interact with the DSO.	1					$ 128,800				

Note to table: This table shows the timing of the step. The cumulative cost is reflected in the total opex cost provided in section 1.2.

2. Future-proofing the workforce through a graduate programme step change

2.1 Description

The electricity industry will face many challenges over the coming decades, one of which is the availability of skilled labour. The whole world needs to decarbonise, and we need to grow our own workforce and not rely on immigrants in order to future proof our workforce and enable us to deliver on our work programmes. At Powerco we take our role seriously to actively support workforce development for the long-term benefit of the sector as a whole. A targeted programme to bring more graduates into the industry and support them to stay in the industry is an important part of addressing workforce challenges.

The increase in investment facing the industry creates deliverability challenges, however, Powerco is well rehearsed in delivering on large capex programmes and we have planned several initiatives to enable us to deliver on our commitments. A scaled up graduate programme is a key component of our plans to increase the pool of skilled employees into key roles. Our future focused graduate programme will be broader to cover all aspects of our business, IT, engineering, policy and regulation, planners and operations and include a 2-year rotation to give graduates a range of experience and increase the likelihood they will stay in the industry. Expanding the programme will also see us investing in developing field staff who are vital for the delivery of a future ready network. Our graduate programme therefore consists of two groups:

i. **technicians** – who are graduates in the field and are on a 2 year rotation. We will recruit a new cohort in every 2 years
ii. **general graduates** – who cover all other areas of the programme and are on a 2-year rotation. We will get a new cohort every year.

Due to the uncertainty around the approval of this step change we have amended the start date of the proposed programme step ups. Implementing changes to our graduate programme takes time and planning, that would prove too difficult to achieve ahead of the first year of the DPP4 period. We have therefore delayed the start of our expected step up in graduates in DPP4, until FY 2027.

Table 3 below, sets out a refined proposed step change for our scaled up graduate programme. This has been assessed against the Commission's revised step change decision making framework. Table 4 provides further breakdown of the roles and timing.

2.2 Assessment of the step change criteria

Table 3 Assessment of criteria

Decision-making factor	Supporting Evidence
Significant	The cost for additional graduates as part of a scaled up graduate programme is significant enough to justify assessment of this step change. This step change application only includes additional graduates / technicians and doesn't include existing graduate intake[4]. **Graduates:** The total value over the DPP4 period: Total opex step change over DPP4 period $2.8m Total FTE count 10 **Technicians:** The total value over the DPP4 period: Total opex step change over DPP4 period $2.4m Total FTE count 6 **Graduate & Technician Support:** The total value over the DPP4 period: Total opex step change over DPP4 period $0.4m Total FTE count 1
Adequately justified with reasonable evidence in the circumstances	Powerco has identified the need to grow the graduate intake to support the growth of the industry and our own programme of work. This ensures our resources are sustainable and adequately trained as the need for a highly skilled workforce continues to grow. This assists with deliverability of our increased work programme by ensuring we have an effective workforce. It also provides for diversity and a workforce that reflects New Zealand. It is prudent for suppliers to invest in graduate programmes and this is demonstrated by the many programmes in place including in the energy sector. In Australia in particular, EDBs are growing graduate programmes and scope by extending programmes to include a focus on software engineering or cyber security, highlighting a need to manage the increased use of technology on networks. A survey of precedence shows that the number of graduates we plan on recruiting and the salary, is aligned with industry practice. There are many examples within the energy sector: • **Essential energy** (EDB Australia) 42 graduates[5] with a specific graduate program for energy transition to renewables.[6] Salary is AUD $74,000-$85,000 / year. Signalling that they intend to grow and expand their graduate program to include cyber security, software development, infrastructure, and operations.

[4] We currently recruit 10 engineering graduates per year

[5] Our People – Essential Energy Annual Report 2022-23, as at 30 June 2023 they had 25 trainees (12 month program) and 17 graduates (4 year program).

[6] Sustainability Graduate Program (Rolling Intake) (unsw.edu.au)

Decision-making factor	Supporting Evidence
	• **Transpower**[7] – growing their graduate programme to 16 graduates, with a salary ranging from $60,000 to $62,000. • **Ausgrid** (EDB Australia) 18 grads in 2024, they had 10 in 2023 – signalling an upwards trend and growth in graduate programs.[8] • **Contact energy**[9] – in 2024, Contact welcomed 11 graduates, and 10 interns. They are doubling their graduate programme to support them in the current period of growth.[10] Salaries range from $65,000 to $68,000.[11] Graduate programmes deliver clear benefits to consumers: • A **cost-effective** way of acquiring skilled workers. • The **availability of skilled labour and enhanced workforce capability** supports our data and digital strategy which will enable flexibility services, improve utilisation of the LV network, enable EV charging and improve the reliability of the network through automated control. • Brings **fresh perspective and innovative thinking**, the outcomes of which will benefit customers through either improved level of service or cost savings. • Allows for **diversified workforce** by bringing in individuals from various backgrounds, cultures and disciplines which fosters creativity that will ultimately benefit customers. • **Long term sustainability** – investing in graduates ensures a pipeline of skilled employees who can contribute to allowing Powerco to deliver on it's work programmes that customers need and value. Our current graduate programme consists of 10 FTEs, we are requesting this to increase to 26 across the DPP4 period (including base year).
Not included elsewhere in the expenditure allowance	Cost information provided is for new capability and personnel hire, and therefore that cost is not be currently captured elsewhere in the expenditure allowance. **Base year:** The base year only includes 10 graduates, this step change is for an additional 17 FTE (Includes 1 support staff) which are not included in the base year. **Trend:** The scale trends are based on historical relationships which do not account for growth as the result of the energy transition. Increasing graduate capability does not scale with growth but rather is needed to address the step up in investment, and skills required for us to adapt to the change in the way the network is utilised. **Cost escalators:** not included in the base year so it is not captured by the cost inflator.

[7] GHD-Advisory-and-Castalia-Transpower-RCP4-Independent-Verification-Report-12-September-2023.pdf (comcom.govt.nz), pg 395
[8] Ausgrid on LinkedIn: Ausgrid Graduate Program - Ausgrid
[9] Contact Energy is a big hit with recent graduates
[10] Contact energy, 2023 integrated report, 14 August 2023, pg 10.
[11] Contact Energy Graduate Programmes | Prosple New Zealand/GradNewZealand

Decision-making factor	Supporting Evidence
Have a driver outside the control of a prudent and efficient supplier	A prudent and efficient supplier would plan for delivering on large capex programmes by increasing capability and capacity across its workforce, in particular drivers of cost increases include: • **Deliverability of increases in network investment.** Workforce growth and different skill sets are required to ensure we can deliver our core investment plans which are forecast to increase ~50% over the DPP4 period (when compared to DPP3). • **Upskilling workforce required.** Challenges with recruiting talent with the right skill. • **Reduce reliance on immigrants**. Graduate programmes focus on upskilling local talent in order to reduce having to source the right people from overseas.
Be widely applicable	It's not uncommon for EDBs to invest in graduate programmes, as it's the prudent thing to do to ensure a sustainable workforce over the long term.

Table 4 Calculation of additional graduate and technicians roles and timing

	No. of Grads	Average Salary	Oncosts	FY25	FY26	FY27	FY28	FY29	FY30	
FY26 Intake	0	73,500	32,940		-	-	-			
FY26 Technicians	0	100,000	34,000		-	-	-			
FY27 Intake	5	73,500	32,940			532,200	532,200			
FY27 Technicians	6	100,000	34,000			804,000	804,000			
FY28 Intake	5	73,500	32,940				532,200	532,200		
FY28 Technicians	0	100,000	34,000				-	-		
FY29 Intake	5	73,500	32,940					532,200	532,200	
FY29 Technicians	6	100,000	34,000					804,000	804,000	
FY30 Intake	5	73,500	32,940						532,200	
People support	1	100,000	34,000			134,000	134,000	134,000	134,000	
Total step per year					-	1,470,200	2,002,400	2,002,400	2,002,400	7,477,400
Adjust for capitalisation				25%		**1,102,650**	**1,501,800**	**1,501,800**	**1,501,800**	5,608,050

Note to table: This table shows the timing of each round in the programme, and the total number of graduates in and out of the 2 year programme over the DPP4 period. The cumulative cost for those in the programme is reflected in the total opex cost provided in section 2.2.

3. Increase in capability required to meet changes in customer expectations and technological change

3.1 Description

The electricity sector's well documented evolution is requiring EDBs to grow new capabilities not supported by trend-based forecasting. These are driven by two main areas:

- **Customer expectations:** customers have access to distributed energy resources and wish to integrate these with the electricity network. Customers expect a seamless service, with modern customer digital tools and platforms, and flexible pricing that supports their business. Customers expect that their DER can be technically integrated into the electricity network.

- **New network technology:** in supporting customer outcomes, the technology available to support a cost efficient and reliable network is changing rapidly. Increasingly network devices are connected to communications networks and provide increased network visibility and control. To support these devices requires additional skillsets and capability.

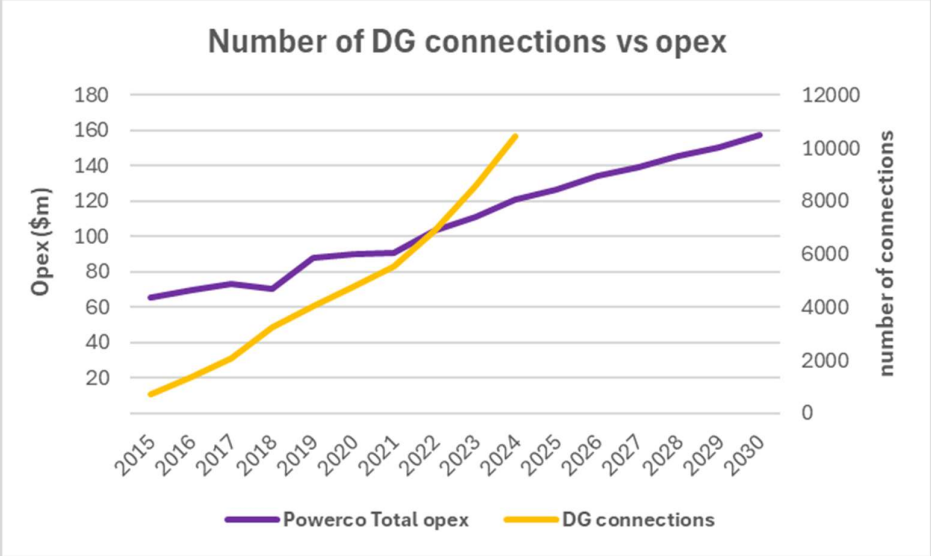
The above points not only related to the LV network but are broader changes across our customers and network.

We have reviewed our initial proposal in our response to the 53ZD notice, against the amended decision-making proposal framework in the Commission's draft decision and represented our step change application in Table 5 below. Table 6 and Table 7 also sets out in more detail a description, justification and timing for each role.

3.2 Assessment of the step change criteria

Table 5 Assessment of criteria

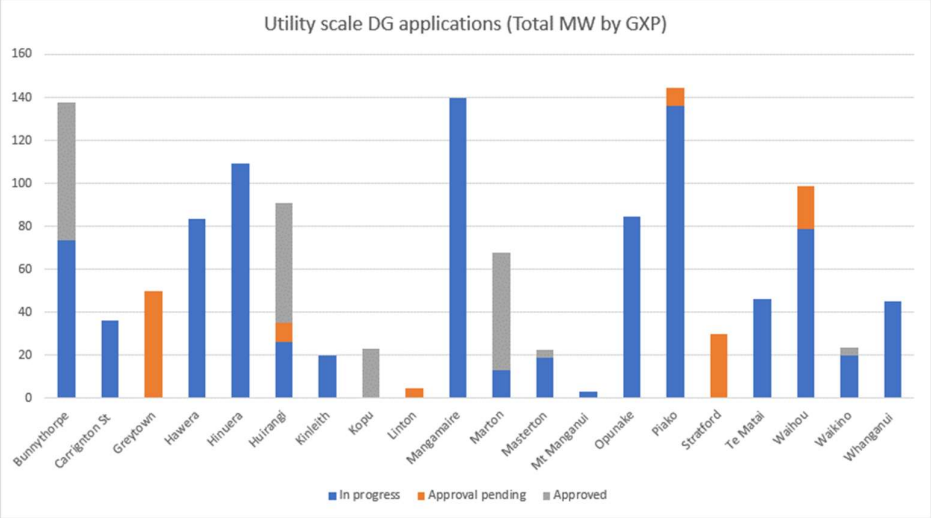
Decision-making factor	Supporting Evidence
Significant	The cost of additional capability in engineering, customer and IT skills to support changing customer expectations and new technology is significant and justifies assessment of this step change. **Customer expectations:** The total value over the DPP4 period: Total opex step change over DPP4 period $3.3m Total FTE count 12 **New network technology:** The total value over the DPP4 period: Total opex step change over DPP4 period $3.8m Total FTE count 9
Adequately justified with reasonable evidence in the circumstances	Customer expectation – we need to deliver a modern service that customers want and need, in a period where customer preferences are changing rapidly. New technology – rolling out new technology to minimise cost and save money over the long term but it takes people and resources to do that in the short-term.

Decision-making factor	Supporting Evidence
	The specific roles and FTE required are determined by working closely with the business subject matter experts, to inform what roles we require to meet our strategic objectives and deliver on our work programmes in this space and supported by our 2024 AMP update. Roles in these two areas are supported by the following evidence: **Changing customer expectations** - solar connections and fast-EV charging Demand for new distributed generation connections have increased significantly over the DPP3 period, increasing on average 20% each year. The figure below shows that DG connections are increasing at a faster rate than our opex spend, which has only increased on average 7% a year over the same period. Figure 1 Trend in DG connections vs opex[12]  Connection interest in grid-scale DG connections has grown rapidly in the last three years. The figure below shows Powerco's current grid-scale DG connections, predominantly solar.

[12] DG connections, EA EMI - Electricity Authority - EMI (market statistics and tools) (ea.govt.nz)

Decision-making factor	Supporting Evidence

Figure 2 Powerco's grid-scale DG pipeline[13]



As we continue to expect an increasing number of DG connection requests, which are forecast to increase 35% over the course of DPP414 we need to support this growth through increased capability in order to adapt to the change in the way customers want to use the LV network and to utilise technological change to fully optimise the network. DG connections require EDBs to consider:

- How DG integration affects power quality, leading to voltage deviations
- Protection systems as the network changes and power starts flowing in reverse direction
- Voltage regulation
- Harmonics
- The ability to control and coordinate DG output, to manage congestion.

While integrated DG offers significant benefits, it is essential to address challenges and ensure proper systems are in place to control networks – that requires new capability. Future investment in a DERMS platform, as part of our Advanced Distribution Management System (ADMS) programme is planned to support this capability.

Customers also expect modern tools and systems to support their DG connections. Powerco has recently developed:

- DG capacity maps to support self-screening of network capacity for grid-scale connections[15]
- On-line DG portal for residential DG applications, replacing paper forms[16]

[13] Distributed generation connection enquiries (powerco.co.nz)
[14] Powerco, *Asset management Plan 2024 – Update*, 31 March 2024, schedule 12C distributed generation connections, growth from 2025 to 2029.
[15] Powerco Large Scale DG Hosting Capacity (arcgis.com)
[16] Powerco DG online form (powerco.co.nz)

Decision-making factor	Supporting Evidence
	The continued development of these tools is required during DPP4, to meet customer expectations. Similar challenges exist for EDBs in supporting the rapid increase in public fast-EV chargers. EV charging on Powerco's network is expected to dramatically increase over the next five years. The Government has committed to accelerate electric vehicle charging infrastructure with a comprehensive, nationwide network of 10,000 public EV chargers by 2030, from a current count of 1,200. Feedback from charge point operators (CPOs) has often included: • Better speed and consistency in understanding network capacity • Better flexibility from EDBs to allow for time-varying charge capacities that maximise output without requiring network upgrades • Clearer and consistent pricing approaches for fast EV chargers. With increasing use of customer distributed energy resources on the low voltage network, the way we currently operate this network will need to change. The LV network will need to be operated similarly to our HV network, with real time operations and monitoring, and improved planned access to work on this increasingly complex network. An LV operations functions is critical to enabling increased customer owned DERs to be connected safely and reliably to the network. **New technology** Electricity distribution networks are undergoing significant changes, supported by increasing technology. Our recent AMPs outline investment in technology programmes that support improved customer outcomes: • Baseline and enhanced automation programmes, improving network reliability, visibility and reducing switching times (refer Chapter 12 of the 2023 AMP) • Increasing LV network monitoring and power quality monitoring to support an open access network (section 10.5 of the 2023 AMP) • These investments are enabled by a modern communications system and related critical systems infrastructure (section 10.7 of the 2023 AMP) Maintaining this technology is significantly different to maintaining traditional network assets – the increased level of configuration, communications and computer based technology requires additional operational technology and communications skillsets. To maximise the value of these investments, Powerco is investing in an ADMS to improve the technology and automation available in the control room. Initial phases of the project that are underway are focused on switch order management, GIS visualisation and distribution power flow. Future phases will leverage the work done on the network model to enable fault location, isolation and fault restoration ability (FLISR), supporting improved network reliability. Investment in new battery technology to support network capacity, power quality and network deferral is also an example of new technology. To ensure these systems

Decision-making factor	Supporting Evidence

are supported, remain safe and reliable requires additional in-house expertise to manage.

Summary of roles required

These costs reflect a thorough analysis of the necessary uplift for each role, not just the addition of new positions and are based on job match data from across NZ. The following table summarises the capability we require.

Role	Reason required	FTE	Total cost over DPP4[17]
Supporting changing customer expectations			
Analytics Developer	Enables creation of business intelligence and analytics deliverables to support accessibility of information for customer centric capabilities, and business decision making and operations.	1	$658,500
Data & Analytics Architect	Establishes and manages the design of the broader data and analytics landscape (environment, applications and integrations etc.) – a key enabler for network modelling and for efficiency improvements such as automation.	1	$775,500
Dynamic modelling / grid connections engineer	Support dynamic modelling capability to enable increasing complexity of DG connections, to serve customers efficiently in their DG connection process internal development of dynamic modelling is required.	1	$147,300
Pricing Analyst	Increase in small scale connection volumes across the business is driving significant complexity / volume of customer upgrades and connections.	1	$515,200
LV network operator	Overseeing real-time LV network operations, maintain network safety and security	5	$619,200
LV Network Access Planner	Enable increasing amounts of DER/LV on our networks – plan for access requirements to be reviewed and manged in real time	3	$557,280
	Totals	**12**	**$3,272,980**

[17] This only includes opex amounts and excludes amounts that capitalised.

Decision-making factor	Supporting Evidence			
	Supporting new technology			
	Asset Engineer	Support renewal and maintenance planning and technical expertise for new non-traditional network solutions such as battery technology. We will need internal capability to manage these assets.	1	$123,900
	Comms RF Engineer	Support the development, maintenance and operations of our telecommunications network to support the increasing amount of communications connected devices and enable a modern electricity network.	1	$374,000
	IT/OT Engineer	Supports the increasing amount connected intelligent devices on the network, ensuring they are correctly configured and operational, and available to the control room for operations.	5	$1,168,200
	ADMS Support Engineer	Supports the new ADMS platform currently in development which is critical to enabling DSO and to improve control room efficiencies. DERMS modules support increasing DER, while FLISR functionality realises the full benefits of increasing network automation.	2	$1,652,000
		Totals	**9**	**$3,818,100**
Not included elsewhere in the expenditure allowance	Cost information provided are for new capability and personnel hire, and therefore that cost will not be currently captured elsewhere in the expenditure allowance. **Base year**: As this is a new activity and expense, we haven't started on yet, it is therefore not included in our base year. **Trend**: The scale trends are based on historical relationships which do not account for growth as the result of new capability and personnel hire for greater use of data, technology and pricing in the future networks. As they are new and do not move in line with ICP growth, capex investment or line length they are not captured elsewhere. But rather they are the result of emerging technology and change in customer preferences. **Cost escalators**: not included in the base year so it is not captured by the cost inflator.			
Have a driver outside the control of a prudent and efficient supplier	The surge in DER and EV connections, which lies beyond the control of EDBs, will significantly impact their operations, requiring a proactive response. The primary drivers of this transformation include:			

Decision-making factor	Supporting Evidence
	• The increasing integration of DERs and electric vehicles, necessitating enhanced visibility and management of the LV network. • The growing availability of market-procured flexibility services to defer capital expenditures. • Advancements in network technology that incorporate increasingly "intelligent" devices, along with remote sensing and control capabilities. The evolution of the sector and the costs associated with the energy transition underscore the necessity of investing in digital skills and advanced technologies during the DPP4 period. The potential benefits to consumers are substantial, including: • Enhanced visibility and utilisation of the LV network, enabling efficient EV charging. • The use of flexibility services to manage peak demand, thus saving customers from inefficient capital expenditures on the network. • Utilising technology to deliver automation will result in efficiency and network reliability gains which can be passed onto customers. A prudent and efficient EDB would invest in facilitating the integration of DERs and EVs while supporting flexibility solutions and demand-side management. Such investments are essential to ensure the efficient and reliable operation of the electricity network as its complexity increases.
Be widely applicable	This step change is generally applicable across all EDBs. It is reasonable to anticipate that most EDBs will require enhanced capabilities in data, digital, and future networks during the DPP4 period. The absence of similar step change applications from other EDBs, and the possibility that we are at the forefront of this initiative, does not undermine its necessity or validity for DPP4.

Table 6 Description of roles and timing of step - Customer

Role	Role Description	Justification	Additional FTEs					Cost				
			FY26	FY27	FY28	FY29	FY30	FY26	FY27	FY28	FY29	FY30
Dynamic modelling / grid connections engineer	New role - Undertake dynamic modelling studies and work closely with grid-scale DG developers to understand and manage system stability issues on the network.	In the last two-three years there has been increasing interest in the connection of grid-scale DG, particularly inverter based solar farms. The connection volume and complexity is something Powerco (and other EDBs) have not experience in the past. In order to serve our customers efficiently in their DG connection processes, some internal development of dynamic modelling is required to work alongside DG consultants to test and understand dynamic impacts to the network. This is especially prevalent in weaker parts of the distribution network, often where land is more affordable and therefore attractive to DG developers.	1					$ 29,460				
Analytics Developer	New role - Brings capability in-house post completion of strategic programme. Enables creation of complex Business Intelligence and analytics deliverables supporting business decision making.	Data & Analytics is a key enabler to efficiency via automating manual data sourcing and preparation processes, and providing data products and services to improve insight and decision making across key business processes. This role enables (complex) analytics deliverables internally at a lower cost than external contractors and retains the associated intellectual property in-house.	1					$ 131,700				
Data & Analytics Architect	New role - Brings capability in-house post completion of strategic programme. Establishes and manages the design of the broader data and analytics landscape (environments, applications, integrations etc).	Data & Analytics is a key enabler to efficiency via automating manual data sourcing and preparation processes, and providing data products and services to improve insight and decision making across key business processes. The Data & Analytics Architect in-sources capability , ensuring our broader Business Intelligence and analytics landscape is designed and managed in a fit-for-purpose manner (reliability, security, supportability, extensibility etc).	1					$ 155,100				
Pricing Analyst	New role - support improved pricing options for customers	Increases in small scale connection volumes expected, such as from fast EV charging.		1					$ 128,800			
LV Network Access Planner	New role - Plan for the growth and security of our LV networks, and enable increasing amounts of DER/DG connection at the LV level. This role enables the access requirements to be reviewed and managed from a safety perspective and management of the real time operations of the LV network.	With the increasing adoption of low-voltage (LV) connected distributed generation (DG), particularly solar energy, along with the rise in electric vehicle (EV) charging, and the likely growth in home energy storage and energy management solutions, our approach to planning and operating LV networks must evolve. Failing to do so could result in poor LV reliability for customers or an inability to efficiently utilize the network, leading to inefficient LV upgrades. We need to rethink how we operate and grant access to the LV network. These roles aim to support the team in safely providing access to the LV network, which is currently managed by the contractor.			3					$ 185,760		
LV Network Operators	New role - capapcity for real time operations moving into LV real time monitoring and execution	Day to day operations to ensure security of our low-voltage (LV) networks, while facilitating the integration of growing distributed energy resources (DER) and distributed generation (DG) connections at the LV level. This role involves reviewing and managing access requirements from a safety perspective, as well as overseeing real-time LV network operations				5					$ 309,600	

Table 7 Description of roles and timing of step - Technology

Role	Role Description	Justification	Additional FTEs					Cost				
			FY26	FY27	FY28	FY29	FY30	FY26	FY27	FY28	FY29	FY30
Asset engineers	Existing role - Support renewal and maintenance planning and technical expertise for new non-traditional network solutions.	With the increasing use of innovative non-traditional network solutions, such as generation and battery storage, there is the need to expand our internal capability in the long term asset management of these fleets. The additional role will ensure that these fleets remain safe and reliable over the long term. These solutions ensure that larger more traditional network solutions can be avoided where practical, helping to manage customer costs.	1					$ 24,780				
Comms RF Engineer	Existing role - Support the development, maintenance and operations of our telecommunications network.	The network technology increasingly relies on the communications network to support, whether for visibility or remote control. The number of connected, telemetered devices is growing quickly on the network, for example through additional reclosers and sectionalisesr, LFIs, and LV monitoring equipment. This additional role reinforces our ability to manage the communications infrastructure supporting these devices, to support this growing and critical infrastructure that enables a modern electricity network.	1					$ 74,800				
ADMS Support Engineer	New role - Support the new ADMS platform currently in development.	The new ADMS platform is an enabling component of a DSO. The initial features will improve the operational efficiency in the control room, streamlining planned outage management and improving tools available for reliabile network operations. Future applications will improve customer reliability (FLISR) and allow for cost effective connection of DG and energy storage (DERMS). These functions will require additional internal resourcing to support and manage these applications, that overall improve customer outcomes.	2					$ 330,400				
IT/OT Engineer	New role - Support the increasing amount of telemetered devices on the network.	We are increasingly installing new "intelligent" devices on the network with telemetry and/or remote control operation for example through additional reclosers and sectionalisesr, LFIs, and LV monitoring equipment.. These new roles are an expansion of our current SCADA engineers who are responsible for the day-to-day management of these connected devices, ensuring they are correctly configured in our SCADA/ADMS and are operating correctly.	2		3			$ 175,600		$ 263,400		

Note to tables: These tables show the timing of the step. The cumulative cost is reflected in the total opex cost provided in section 3.2.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