

**GAS ASSET
MANAGEMENT
PLAN

2021**

Disclaimer:

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INTRODUCTION

1.1 EXECUTIVE SUMMARY

Aotearoa is preparing to rapidly evolve as the country embarks on an adaption and mitigation path in response to our global climate change commitments. The energy sector is delicately balancing how we can do our fair share to meet emission reduction targets, with consumer expectations for reliable and continuous supply of energy at an affordable price, and commercial realities around infrastructure investment in an uncertain regulatory environment.

In the short to medium term, our demand forecast reflects that natural gas has an important role to play in providing homes and businesses with safe, reliable and affordable energy and enabling Aotearoa's economic prosperity. In the medium to longer term and as the country embraces electrification, natural gas and low carbon gases can provide the flexibility to meet daily and seasonal peaks in demand, and back up renewable generation.

The uncertain regulatory environment is impacting the economics of infrastructure investment:

- There is an emerging tension between the potential lifecycle of our network and the period required to recover the ongoing capital investment necessary for operational standards to be improved.
- Decisions we make in the near term to plan and build our network need to factor in the risk of stranding these assets and future costs being borne by a smaller group of consumers.
- Without increased surety on investment returns, network operators are hesitant to allocate meaningful funding to support an accelerated demonstration path, such as undertaking commercial trials with alternative gases and exploring options to re-purpose the existing network footprint.

We have developed our 10-year forward investment programme, demand outlook and operating costs for this AMP update with a cautious approach that reflects the uncertainty about imminent government policy and the regulatory environment. In adopting this holding pattern, we have not made capital expenditure allowances to demonstrate the commercial viability of alternative gas technologies and sources that we are currently exploring. Changes to our 10-year demand and expenditures forecast will be required if policy and regulatory settings materially impact the current assumptions we've relied on; these will be factored into future AMPs and any re-forecasting provided to the Commission.

1.2 PURPOSE OF THE DOCUMENT

Powerco's gas network provides an important service to many households and businesses across the North Island of New Zealand. As long-term stewards of the network assets, our aim is to focus on managing the network to deliver a safe, high-quality and highly efficient gas supply. Our gas business has an objective to deliver exceptional service to our customers and this influences our overall attitude, our priorities and day-to-day activities.

The purpose of this 2021 Asset Management Plan update (AMP update) is to provide an update to our stakeholders and customers on our progress against the plans stated in the 2020 AMP, with a focus on the material changes that affect our planned expenditure and development plans. Schedule 13 Report on Asset Management Maturity remains unchanged since the last published AMP.

Since 2013, we have publicly disclosed our long-term expenditure forecasts every year, and we have published four comprehensive Asset Management Plans (AMP).

This AMP update covers a 10-year planning period from 1 October 2021 to 30 September 2031.

This AMP update was certified and approved by Powerco's Board of Directors on 19 August 2021.

1.3 COMPLIANCE WITH INFORMATION DISCLOSURE REQUIREMENTS

This AMP update complies with the Gas Distribution Information Disclosure Determination 2012 (consolidated in 2018). We have structured this document to enable the reader to easily match the contents with the disclosure requirements.

The specific requirements on the contents of the AMP update are included in clauses 2.6.5 and 2.6.6. The AMP update must:

- Relate to the gas distribution services supplied by the gas distribution business (GDB).
- Identify any material changes to the network development plans disclosed in the last AMP.
- Identify any material changes to the lifecycle asset management (maintenance and renewal) plans disclosed in the last AMP.
- Provide the reasons for any material changes to the previous disclosures in the Report on Forecast Capital Expenditure set out in Schedule 11a and Report on

Forecast Operational Expenditure set out in Schedule 11b.

- Identify any changes to the asset management practices of the GDB that would affect a Schedule 13 Report on Asset Management Maturity disclosure.
- Include the reports set out in Schedule 11a, 11b, 12a, 12b and 12c, respectively related to:
 - Forecast Capital Expenditure
 - Forecast Operational Expenditure
 - Asset Condition
 - Forecast Utilisation
 - Forecast Demand.

1.4 SUMMARY OF MATERIAL CHANGES

There are several material changes in this year's asset management plan when compared with our 2020 AMP, which was also when the last full AMP was published:

- **Safety and Reliability:** As we bring the remainder of our networks up to acceptable capacity levels over the next few years, we will redirect some Quality of Supply (QOS) expenditure over to Asset Renewal and Replacement (ARR) work, specifically to the pre-1985 pipeline replacement programme to allow us to accelerate this work over the second half of the planning period. This is an important investment in the long-term safety and reliability of our network.
- **Growth:** There is an increase in number of consumer connections and resulting expenditure in RY21 compared to RY20, which is driven by a catch-up in the backlog created during the Covid-19 lockdown in RY20. Consumer connections expenditure remains stable compared to previous forecasts for the remainder of the planning period.
- **Capital Expenditure:** There is an increase in non-network capital expenditure over the planning period due to Enterprise Resource Planning (ERP) investments and an update to the allocation methodology with our electricity business.
- **Operational Expenditure:** There is an overall increase in non-network operational expenditure over the planning period due to increased Business Support costs, as described in section 1.15.2.
- **ISO55000:** After reviewing the cost to benefit of achieving accreditation, we have concluded that the best value can be achieved by simply aligning our asset management systems and practises to the ISO55000 asset management standard, rather than pursuing full accreditation.

There have been some minor amendments to network plans affecting the timing and, in some cases, the solution proposed in last year's AMP. The amendments, however, do not materially alter the overall expenditure forecasts.

1.5 STRUCTURE OF THE 2021 AMP UPDATE

This AMP update is designed to meet disclosure requirements. In the interests of brevity, we have not attempted to duplicate the more explanatory style of the 2020 AMP.

If the reader seeks detailed information on how Powerco manages its gas assets over the long-term, we encourage them to revert to the 2020 AMP, available on Powerco's website (www.powerco.co.nz).

This AMP update has four sections:

- Section 0 introduces the document.
- Section 0 discusses the changes in asset lifecycle and network development plans published in Sections 6 & 7 of the 2020 AMP.
- Section 0 provides the justification for the changes in the expenditure forecasts.
- Section 0 provides schedules 11a, 11b, 12a, 12b and 12c.

CHANGES IN NETWORK PLANS

1.6 CONTEXT

Powerco operates 35 distribution sub-networks over five regions:

- Wellington
- The Hutt Valley and Porirua
- Taranaki
- Manawatu and Horowhenua
- Hawkes Bay.

Powerco believes that gas distribution networks in New Zealand play, and will continue to play, an important part of our energy mix. It is an integral part of the country's energy security, is affordable, and has the potential to lower greenhouse gas emissions when displacing coal and other hydrocarbon fuels. In line with our long-term approach to asset management, we are investigating and readying our assets for alternative uses, including conveying biomethane and hydrogen.

Each year the Asset Strategy Team consults with internal and external stakeholders to prioritise a list of potential capital works projects based on scorings for our key value drivers of delivery, reliability, safety, efficiency and partnership. In conjunction with our network and asset lifecycle strategies, these value drivers allow us to identify three to six years of specific projects, with placeholder projects for known growth areas and renewals of different asset types used for longer term financial planning. This approach strikes a balance between keeping long term plans flexible while allowing visibility of works over coming years.

For this AMP update, we have reviewed the list of projects, their timing, and added projects in response to changes or issues identified since publishing the 2020 AMP.

1.7 ALL NETWORKS

1.7.1 PRE-85 RENEWALS RAMP UP

Internal workshops are being held regarding the rate at which we ramp up pre-85 renewals expenditure compared to historical renewal rates. See Figure 1 showing response to a persistently leaking section on Waterloo Road near Lower Hutt CBD.

In the time that this Waterloo Road project was on the waitlist for delivery, the cost of reactively responding to various leaks on this section of main exceeded the capital

cost of replacing a whole section of the mains on the street. This is an example of where whole-life-network-cost savings could have been made by increasing delivery budgets.

Preliminary analysis indicates there are likely to be more sections of the network that are leaking at a similar rate to Waterloo Road and that an increase to the pre-85 renewals rates may be justified.



Figure 1: Major Leak on Waterloo Road

1.7.2 LOGGER REPLACEMENT

To monitor the extremity of the network a fleet of around 70 small portable loggers are rotated through extremities of the network. These loggers operate on the 2G network and will cease to function in 2025. It is proposed to replace the units with 3G capable units. A pilot for a few units in each region is planned for FY23, with the remaining units being upgraded over the following two to four years alongside the installation of permanent monitoring points.

1.8 WELLINGTON

1.8.1 CBD PRESSURE UPGRADE

Uplift works are complete for the final sector of the project. Wellington's LP network, previously named as Wellington CBD, has been fully upgraded to HLP and merged with the neighbouring Wellington 25kPa pressure system, supplying 25kPa to customers. Final close out works were completed in RYE21.

The upgrade will now provide ample capacity for the city to grow, ensure resilience by linking to the surrounding network, and allow Powerco the opportunity to provide sought-after higher meter operating pressures to run slightly higher-pressure equipment for larger commercial sites within the city.

1.8.2 WELLINGTON NORTH

Most subdivision growth in Wellington is occurring in Woodridge (Newlands), Grenada and Churton Park. As the subdivisions continue to grow away from the points of supply, the network starts to become constrained. We have worked to increase the diameter of the trunk mains feeding these areas, however there are still some smaller diameter mains requiring an upgrade.

A slight adjustment in supply pressure from the local regulating station in Wellington North, along with a slower than originally budgeted for new house construction rate, have provided headroom for deferral of planned trunk main upgrades. Extremity pressure monitoring is indicating the growth shows capacity is still adequate, allowing us to defer the upgrade projects to later years.

We plan to upgrade the following mains to support the forecast growth:

- Churton Park: Westchester Drive in RY22 (no change from 2020 AMP).
- Butavas Street PRS inlet pipeline: Growth is having minimal impact on pressures in the area and is not affecting the ability to supply gas into the 25kPa system. We no longer anticipate the need to reinforce this station's inlet pipeline over the planning period.
- Grenada: Slow growth in Grenada Village has pushed the Mark Ave reinforcement back from RY24 to RY27.

1.8.3 CHARTWELL DRIVE PRESSURE UPLIFT

The subdivision growth to the north is expected to be completed in RY25. Some infill growth may continue, but pressure monitoring indicates reinforcement should not be required over the planning period.

1.8.4 DOVER STREET DRS RENEWAL

The project scope was to remove the existing station and renew with an underground Cocon unit. Originally works were intended for completion in FY19. However, completion of the project has been delayed by a variety of roadblocks including:

- Challenges negotiating the placement of the DRS where the original designs had to be discarded to accommodate Council recreational land use changes.
- DRS relocation was halted when unexpected low pressures were encountered during some pre-works. A blockage was found in a tee fitting, shown in Figure . This material had likely been lodged in the fitting since installation, back in the 80/90s. Troubleshooting effort to find this blockage delayed the project.
- Works were further delayed during Covid 19 lockdown level transitions.
- Troubleshooting efforts required to get proper regulator lockups with a new (to Powerco's network) type of regulator station configuration.



Figure 2: Rags found in network during Dover Street project works

1.9 HUTT VALLEY AND PORIRUA

1.9.1 BELMONT LIP

Constraints on the LIP (Low Intermediate Pressure pipeline) had been observed on the main feeding part of the Upper Hutt network as well as the Wallaceville system (including new subdivision). The completion of the Upper Hutt and Wallaceville rationalisation projects has improved pressures in the area, shifting the low point to Wainuiomata.



Figure 3: New Whakatiki St Cocon, part of the Upper Hutt Rationalisation project

Completion of the Avalon/Belmont Rationalisation project is expected in RY22. This will see further improvement on the LIP pressures as the new Avalon LIP DRS delivers better pressures than the current aging asset.

Growth in demand in Wainuiomata will continue to create a constraint on the Belmont LIP. High rates of infill coupled with subdivision growth indicate an additional 800 lots over the next 20 years. This growth will constrain the small diameter mains of the LIP system supplying the Norfolk DRS. We will reinforce this constraint by laying new mains interconnecting the LIP along Parkway and Nelson Crescent. We plan to schedule design in RY25 and deliver construction and commissioning in RY26.

1.9.2 WAIONE STREET BRIDGE BRACKET RENEWAL

Multiple localised area defects for corrosion on the IP bridge crossing have been detected as part of routine maintenance, see Figure 4. Corrosion spots are concentrated on the pipe support brackets. The bridge crossing is the sole feed from Riddlers Crescent DRS (Petone) to the rest of the Hutt Valley network, which means the importance of the asset calls for proactive renewals.



Figure 4: Corrosion on Waione Street Bridge Pipeline

1.10 MANAWATU

1.10.1 PALMERSTON NORTH RATIONALISATION

Palmerston North's network architecture is characterised by numerous small stations spread out across the city. Most stations in the scope area are near, or past, the end of their standard asset lives presently. We will reconfigure the network to reduce the number of pressure stations while increasing capacity and resilience by undergrounding new assets.

Overall, the rationalisation scope aims to:

- Reduce above ground vehicle hazards by undergrounding DRS supply points.
- Remove above ground supply points without fire valves.
- Replace aging stations with obsolete pressure regulators.
- Improve low winter pressures at the network extremities.
- Ensure the network is compliant with Powerco’s sectorisation guidelines.

The project has been split into at least three parts; entailing works on the East and West side of the city as split by the State Highway as well as retrofitting sectorisation ability into the MP network. The East upgrade is now in detailed design phase. The West upgrade is likely to be split further into smaller scopes to enable delivery over two to three years.

1.10.2 OROUA DOWNS

Unexpected growth in commercial load required urgent upgrades at the gas gate. These were designed and delivered in FY21. Since the upgrade, pressures in the network have been poorer than desirable for a single commercial consumer on the network. No other customers have been, or are expected to be, impacted by the poor pressure performance of this network. Upgrades to obtain further capacity would be prohibitively costly and are unlikely to proceed. Ongoing monitoring and communications with the commercial user experiencing undesirably poor pressure are ongoing.

1.11 TARANAKI

1.11.1 INGLEWOOD

Inglewood is experiencing strong domestic connection growth. Rates over the last few years have seen 20 to 30 domestic infill houses connecting to mains fronting their properties, a significant growth rate considering the system contains only ~800 customers. Pressures are slowly decreasing accordingly, and peak winter pressures have reached a threshold requiring ongoing monitoring. If domestic growth persists, upgrades would be required in about five years’ time. The preferred upgrade is transferring large commercial load to be more favourably connected to trunk mains.

1.11.2 PLUG VALVE REPLACEMENT PILOT

A pilot project has been scoped to replace non-specification Mueller and MacDonald gas meter isolation valves on the network with standard isolation valves. Mueller and MacDonald are two manufacturers of plug valves common on the Powerco network. This type of valve, presented in Figure 5, require tools to turn, which can hamper

emergency response. They have an elevated risk of leaking and passing gas when used to isolate the gas supply to a meter.



Figure 5: Mueller Plug Valve

It is unclear how many of the plug valves are prone to passing gas or are seized. Plug valves are currently recorded as ‘green’ defects reflecting that the immediate risk associated with individual valves is currently regarded as low. More information would be beneficial to confirming the risks associated with these valves. To gather the information needed, a plug valve project has been setup as a pilot. The scope of the pilot project is to replace approximately 40 plug valves on customers in Carrington Street in New Plymouth, highlighted in Figure 6.

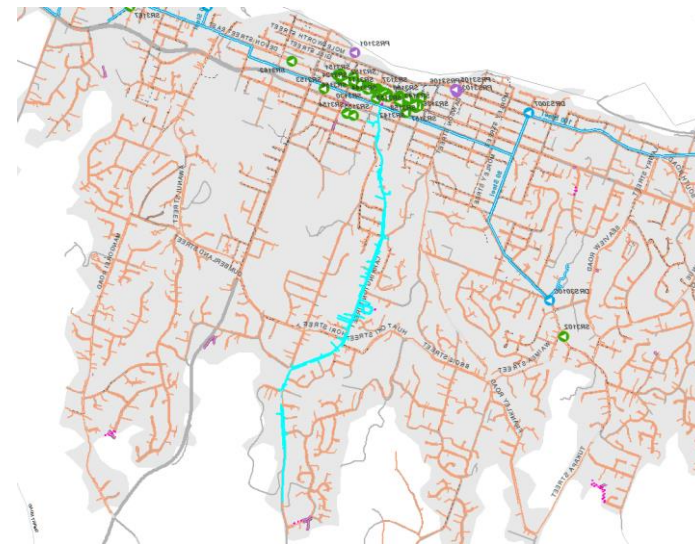


Figure 6: Area of plug valve pilot project

1.12 HAWKES BAY

1.12.1 HAVELOCK NORTH REINFORCEMENT

Havelock North is seeing growth in gas customers from both existing homes connecting to gas as well as new subdivision growth. This growth is placing constraint on the network which is fed off a single main coming from Hastings.

The feasibility study concluded that the preferred option allowed for a solution that could be delivered in a staged approach as follows. Additional phases will be constructed gradually as growth is realised.

Phase 1 (short-term): Install a new, larger, MP main from the Karamu Road DRS, through Hastings city and along Howard Street, interconnecting at St Georges Road. This will allow more gas to be conveyed south with minimal pressure drop. Delivery is planned for RY22.

Phase 2 (medium-term): Upgrade the main in Phase 1 to LIP, with a new DRS supplying from the Hastings IP into the main at 700kPa, and a new LMP supply point (district regulator station) installed at St Georges Road, delivering additional capacity into Havelock North. Forecast as needed in RY26.

Phase 3 (long-term): Extend the new LIP main east along St Georges Road, and south along Crosses Road and relocate the supply point further into Havelock North at Napier Road. Forecast as needed in RY29.

1.12.2 TE AWA AVE PRESSURE UPLIFT

Growth in industrial demand has led Powerco to uplift the pressures supplied from its new Te Awa Avenue Cocon (installed in early RY21). Figure 7 shows MP mains extensions installation to connect to the new industrial area.

In late RY21, the Te Awa Ave area was isolated from the surrounding Napier LMP pressure system, with pressure uplifted from 210kPa to 350kPa. This system is now called Awatoto MP.



Figure 7: Network extensions near Te Awa Avenue in Napier

1.12.3 NGARURORO BRIDGE BRACKET REPLACEMENT

Bracket renewal is planned for 2023 at this bridge crossing, and the design process is underway. Figure 8 provides an example of the damage caused by the current bridge brackets to the IP pipeline.



Figure 8: Ngaruroro Bridge Bracket Replacement

CHANGES IN EXPENDITURE FORECASTS

1.13 CONTEXT

Our updated capital expenditure forecast is slightly higher than our 2020 AMP forecast. Consumer connection expenditure has increased in the current year as we filled a backlog of connections due to the Covid-19 lockdown the previous year. Additionally, the development of our Enterprise Resource Planning (ERP) system has seen an increase in forecast of non-network expenditures.

Our updated operational expenditure forecast has increased since the 2020 AMP forecast. Increases are attributed to increases in non-network related Business Support costs.

A summary of forecast capital expenditure (CAPEX) and operational expenditure (OPEX) over the planning period is provided in the figures below. A more detailed summary of forecast expenditure is provided as part of the schedules in Section 0.

The graphs that follow show forecast expenditures in 2021 constant-dollar terms to 2030/31.

1.14 CAPITAL EXPENDITURE

Our forecast for total capex is largely stable over the planning period. It represents our current best view based on our Asset Management Strategies and using available network information. There is an increase in the second half of the planning period due primarily to non-network capex increases, driven primarily by the development of our ERP system.

1.14.1 NETWORK CAPEX

- Consumer connections expenditure increased in RY21 as we worked hard to tackle a backlog of connections created during the Covid-19 lockdown in RY20. This is evident as the connection numbers and resulting expenditure in RY20 were significantly lower than the previous two years, with a subsequent spike in expenditure in RY21. Forecasts for the remainder of the planning period remain aligned with previous forecasts.
- The remainder of network capex remains constant with previous forecasts, with a shift in expenditure from quality of supply to asset replacement and renewal as we get all our network up to capacity and focus on our pre-85 pipeline replacement programme.

1.14.2 NON-NETWORK CAPEX

The profile through time reflects the costs of ERP being higher than forecast, and an update to the allocation methodology.

Figure 9 shows the difference in our forecasts disclosed in our previous AMPs, and the actuals since RY18 (converted into 2021 constant-dollar terms).

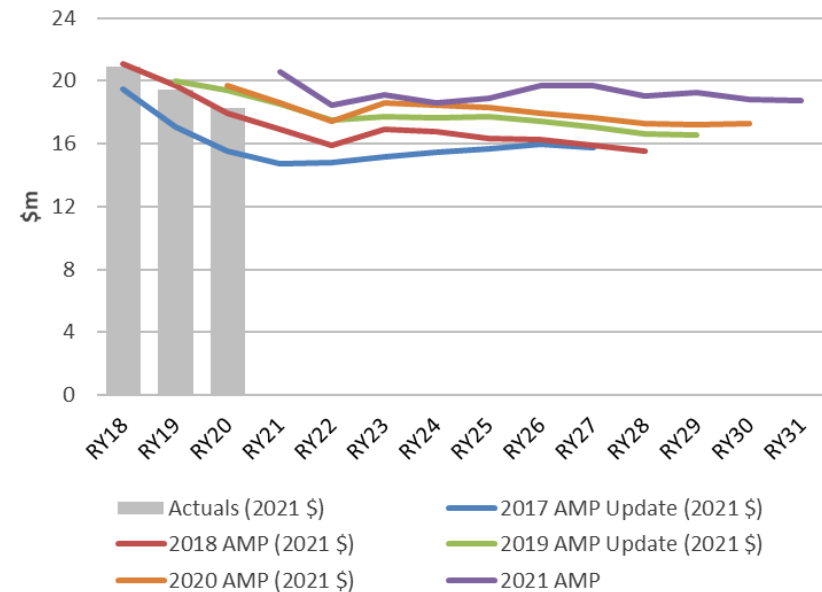


Figure 9: Comparison of Capital Expenditure (constant \$)

Figure 10 summarises the capital expenditure with a category breakdown. The 2020 AMP forecasts have been added for comparison purposes.

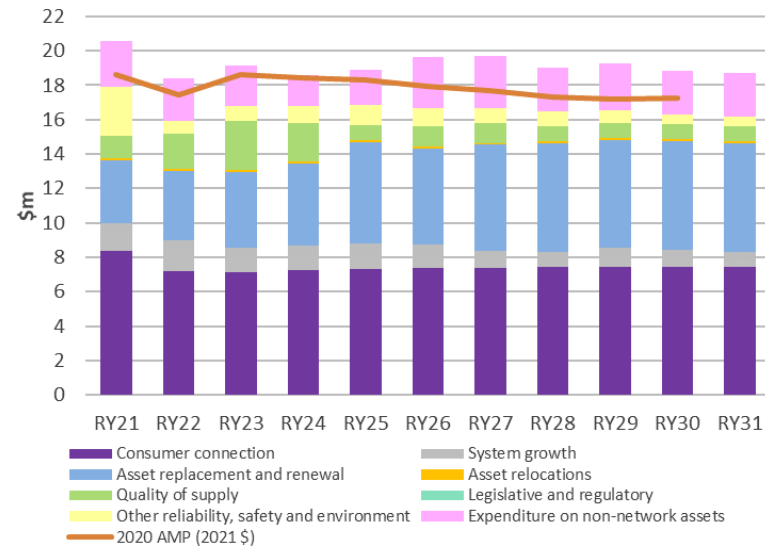


Figure 10: 2021 AMP Update Capital Expenditure Summary (constant \$)

1.15 OPERATIONAL EXPENDITURE

Opex forecasts have increased from previous forecasts, with an increase from the 2020 AMP, however aligning closer to 2017 AMP forecasts. Opex is forecast to remain relatively constant during the planning period.

1.15.1 NETWORK OPEX

Network opex levels remain stable with a slight increase expected over the planning period as we maintain a growing network.

1.15.2 NON-NETWORK OPEX

With the SONS forecast remaining stable, non-network opex increases since previous forecasts are driven primarily by Business Support costs. An adjustment to the cost allocation with our electricity business, brings the profile in line with 2017 AMP forecasts, with an increase in expenditure including the following additional costs:

- Establishment of the Corporate Sustainability Team.

- Implementation of enhanced cyber security.
- Support ERP adoption and on-going integration.
- Uptake of new digital solutions, including cloud services, with associated higher data network, software maintenance or subscription costs.

Figure 11 below shows the revised operational expenditure forecast.

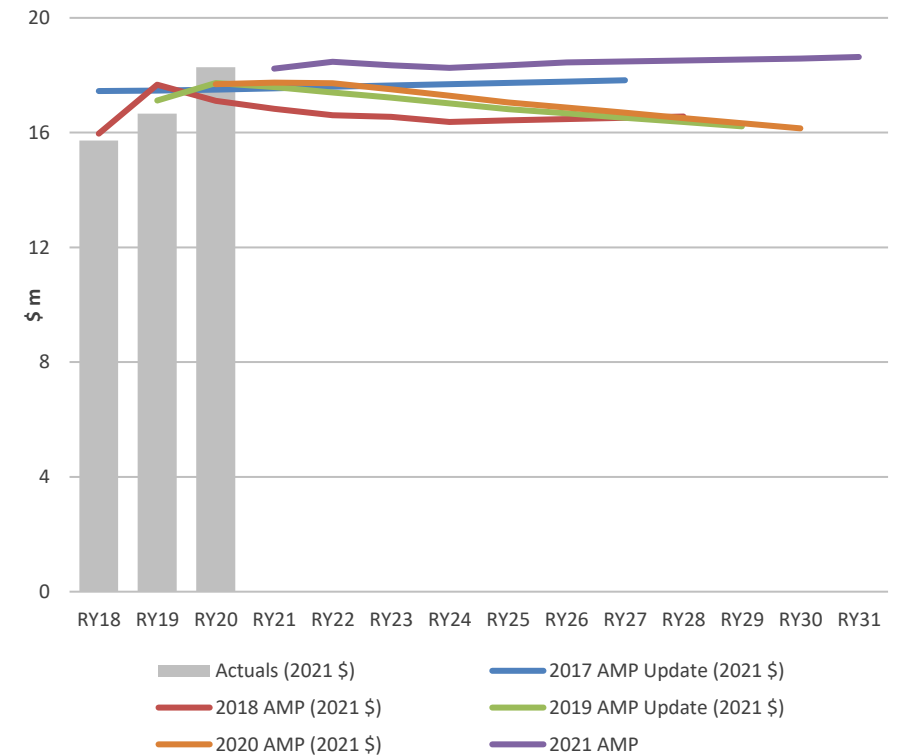


Figure 11: Comparison of Operational Expenditure (constant \$)

Figure 12 shows the summary of operational expenditure broken down by spend categories. The 2020 AMP forecast have been added for comparison purposes.

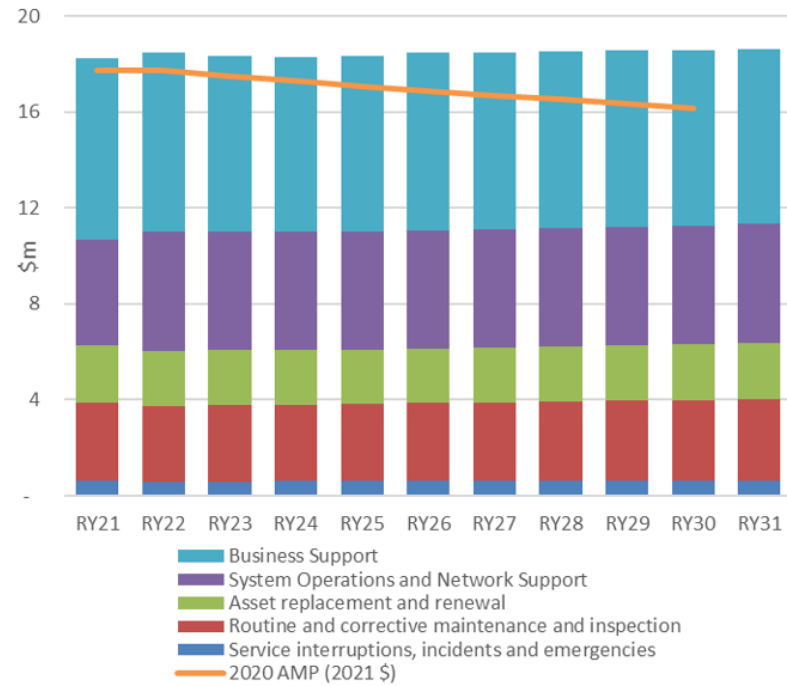


Figure 12: 2021 AMP Operational Expenditure Summary (constant \$)

92	Low Pressure						
93	Main pipe	0	2	2	1	1	2
94	Service pipe	0	1	1	1	1	1
95	Line valve	0	0	0	0	0	0
96	Special crossings	0	0	0	0	0	0
97	Low Pressure total	0	3	3	2	2	2
98	Other network assets						
99	Monitoring and control systems	-	-	-	-	-	-
100	Cathodic protection systems	-	-	-	-	-	-
101	Other assets (other than above)	-	-	-	-	-	-
102	Other network assets total	-	-	-	-	-	-
103							
104	System growth expenditure	1,613	1,755	1,429	1,461	1,472	1,374
105	less Capital contributions funding system growth	83	90	73	75	75	70
106	System growth less capital contributions	1,531	1,665	1,356	1,386	1,396	1,304
107							
108							
109		Current Year CY	CY+1	CY+2	CY+3	CY+4	CY+5
	for year ended	30 Sep 21	30 Sep 22	30 Sep 23	30 Sep 24	30 Sep 25	30 Sep 26
110	11a(iv): Asset Replacement and Renewal						
111	Intermediate pressure	\$000 (in constant prices)					
112	Main pipe	10	17	53	47	60	22
113	Service pipe	5	8	25	22	28	11
114	Stations	698	856	275	-	-	1,152
115	Line valve	8	585	1	1	1	0
116	Special crossings	622	0	0	0	0	0
117	Intermediate Pressure total	1,342	1,466	353	71	89	1,186
118	Medium pressure						
119	Main pipe	1,248	1,611	2,348	2,701	3,491	2,746
120	Service pipe	588	759	1,222	1,505	1,878	1,526
121	Station	-	-	-	-	-	-
122	Line valve	7	6	18	16	20	7
123	Special crossings	1	1	4	4	5	2
124	Medium Pressure total	1,844	2,377	3,592	4,226	5,395	4,281
125	Low Pressure						
126	Main pipe	1	1	4	3	4	2
127	Service pipe	0	1	2	2	2	1
128	Line valve	0	0	0	0	0	0
129	Special crossings	0	0	0	0	0	0
130	Low Pressure total	1	2	6	5	7	2

131	Other network assets						
132	Monitoring and control systems						
133	Cathodic protection systems	474	225	396	447	359	93
134	Other assets (other than above)	-	-	-	-	-	-
135	Other network assets total	474	225	396	447	359	93
136							
137	Asset replacement and renewal expenditure	3,660	4,069	4,347	4,749	5,850	5,562
138	less Capital contributions funding asset replacement and renewal	-	-	-	-	-	-
139	Asset replacement and renewal less capital contributions	3,660	4,069	4,347	4,749	5,850	5,562

141 **11a(v): Asset Relocations**

142	Project or programme*						
143	None						
144							
145							
146							
147							
148	* include additional rows if needed						
149	All other projects or programmes - asset relocations	84	121	121	121	121	121
150	Asset relocations expenditure	84	121	121	121	121	121
151	less Capital contributions funding asset relocations	71	103	103	103	103	102
152	Asset relocations less capital contributions	13	18	18	18	18	18

154 **11a(vi): Quality of Supply** for year ended

	Current Year CY 30 Sep 21	CY+1 30 Sep 22	CY+2 30 Sep 23	CY+3 30 Sep 24	CY+4 30 Sep 25	CY+5 30 Sep 26
157	\$000 (in constant prices)					
158	Wellington CBD Pressure Upgrade	1,315	-	-	-	-
159	Havelock North Reinforcement	5	931	-	-	288
160	Palmerston North Rationalisation	-	350	1,450	1,099	-
161	Karori Rationalisation	-	269	500	231	-
162						
163						
164	* include additional rows if needed					
165	All other projects or programmes - quality of supply	11	438	912	910	873
166	Quality of supply expenditure	1,331	1,988	2,862	2,241	1,157
167	less Capital contributions funding quality of supply	-	-	-	-	-
168	Quality of supply less capital contributions	1,331	1,988	2,862	2,241	1,157

170	11a(vii): Legislative and Regulatory						
171	<i>Project or programme</i>						
172	None						
173							
174							
175							
176							
177	<i>* include additional rows if needed</i>						
178	All other projects or programmes - legislative and regulatory						
179	Legislative and regulatory expenditure	-	-	-	-	-	-
180	<i>less</i> Capital contributions funding legislative and regulatory	-	-	-	-	-	-
181	Legislative and regulatory less capital contributions	-	-	-	-	-	-
182	11a(viii): Other Reliability, Safety and Environment						
183	<i>Project or programme*</i>						
184	Isolation Plans and Resilience	660	35	49	330	660	523
185	Upper Hutt Rationalisation	424	-	-	-	-	-
186	Avalon/Belmont Rationalisation	982	82	-	-	-	-
187	Wainuiomata Rationalisation	272	-	-	-	-	-
188							
189	<i>* include additional rows if needed</i>						
190	All other projects or programmes - other reliability, safety and environment	470	666	797	644	559	556
191	Other reliability, safety and environment expenditure	2,809	783	845	973	1,219	1,079
192	<i>less</i> Capital contributions funding other reliability, safety and environment	-	-	-	-	-	-
193	Other Reliability, safety and environment less capital contributions	2,809	783	845	973	1,219	1,079
194							
195	11a(ix): Non-Network Assets						
196	Routine expenditure						
197	<i>Project or programme*</i>						
198	ICT capex	808	777	958	941	987	1,332
199	Facilities	158	192	98	58	66	57
200	Leases	244	298	298	298	298	298
201							
202							
203	<i>* include additional rows if needed</i>						
204	All other projects or programmes - routine expenditure	-	-	-	-	-	-
205	Routine expenditure	1,209	1,268	1,355	1,297	1,352	1,688
206	Atypical expenditure						
207	<i>Project or programme*</i>						
208	ICT capex (new capability)	1,180	1,142	986	435	350	932
209	Facilities	275	76	30	63	293	355
210							
211							
212							
213	<i>* include additional rows if needed</i>						
214	All other projects or programmes - atypical expenditure	-	-	-	-	-	-
215	Atypical expenditure	1,456	1,218	1,016	498	643	1,288
216							
217	Expenditure on non-network assets	2,665	2,486	2,371	1,795	1,994	2,975

Company Name	Powerco Limited
AMP Planning Period	1 October 2021 – 30 September 2031

SCHEDULE 11b: REPORT ON FORECAST OPERATIONAL EXPENDITURE

This schedule requires a breakdown of forecast operational expenditure for the disclosure year and a 10 year planning period. The forecasts should be consistent with the supporting information set out in the AMP. The forecast is to be expressed in both constant price and nominal dollar terms. GDBs must provide explanatory comment on the difference between constant price and nominal dollar operational expenditure forecasts in Schedule 14a (Mandatory Explanatory Notes). This information is not part of audited disclosure information.

sch ref

	Current year CY for year ended 30 Sep 21	CY+1 30 Sep 22	CY+2 30 Sep 23	CY+3 30 Sep 24	CY+4 30 Sep 25	CY+5 30 Sep 26	CY+6 30 Sep 27	CY+7 30 Sep 28	CY+8 30 Sep 29	CY+9 30 Sep 30	CY+10 30 Sep 31
Operational Expenditure Forecast	\$000 (in nominal dollars)										
Service interruptions, incidents and emergencies	607	604	620	637	655	674	693	712	732	753	774
Routine and corrective maintenance and inspection	3,260	3,199	3,284	3,377	3,473	3,571	3,671	3,775	3,882	3,991	4,104
Asset replacement and renewal	2,427	2,321	2,375	2,392	2,410	2,478	2,548	2,620	2,694	2,770	2,848
Network opex	6,294	6,124	6,279	6,406	6,537	6,722	6,912	7,107	7,308	7,514	7,726
System operations and network support	4,385	5,052	5,118	5,214	5,319	5,425	5,534	5,644	5,757	5,872	5,990
Business support	7,553	7,591	7,590	7,640	7,879	8,098	8,245	8,390	8,540	8,689	8,865
Non-network opex	11,937	12,643	12,708	12,855	13,197	13,523	13,778	14,034	14,297	14,562	14,855
Operational expenditure	18,231	18,767	18,987	19,261	19,735	20,245	20,690	21,141	21,605	22,076	22,581
	\$000 (in constant prices)										
Service interruptions, incidents and emergencies	607	594	599	604	609	614	619	624	629	634	639
Routine and corrective maintenance and inspection	3,260	3,148	3,174	3,201	3,228	3,254	3,280	3,307	3,333	3,360	3,387
Asset replacement and renewal	2,427	2,284	2,296	2,268	2,240	2,258	2,276	2,295	2,313	2,332	2,351
Network opex	6,294	6,026	6,069	6,074	6,077	6,126	6,175	6,225	6,275	6,326	6,377
System operations and network support	4,385	4,971	4,946	4,944	4,944	4,944	4,944	4,944	4,944	4,944	4,944
Business support	7,553	7,470	7,335	7,244	7,323	7,380	7,366	7,349	7,333	7,315	7,317
Non-network opex	11,937	12,442	12,282	12,187	12,267	12,324	12,310	12,293	12,277	12,259	12,261
Operational expenditure	18,231	18,468	18,350	18,261	18,344	18,449	18,485	18,518	18,552	18,585	18,638
Subcomponents of operational expenditure (where known)											
Research and development	-	-	-	-	-	-	-	-	-	-	-
Insurance	72	73	75	76	78	79	81	83	84	86	88
	\$000										
Difference between nominal and real forecasts											
Service interruptions, incidents and emergencies	-	10	21	33	46	60	74	88	103	119	135
Routine and corrective maintenance and inspection	-	51	110	175	245	317	391	468	548	631	717
Asset replacement and renewal	-	37	80	124	170	220	272	325	381	438	497
Network opex	-	98	210	332	461	596	737	882	1,032	1,188	1,349
System operations and network support	-	80	172	271	375	481	590	700	813	928	1,046
Business support	-	121	254	397	555	718	879	1,041	1,206	1,374	1,548
Non-network opex	-	201	426	667	930	1,200	1,469	1,742	2,020	2,302	2,594
Operational expenditure	-	299	636	1,000	1,391	1,796	2,205	2,624	3,052	3,490	3,943

Company Name	Powerco Limited
AMP Planning Period	1 October 2021 – 30 September 2031

SCHEDULE 12a: REPORT ON ASSET CONDITION

This schedule requires a breakdown of asset condition by asset class as at the start of the forecast year. The data accuracy assessment relates to the percentage values disclosed in the asset condition columns. Also required is a forecast of the percentage of units to be replaced in the next 5 years. All information should be consistent with the information provided in the AMP and the expenditure on assets forecast in Schedule 11a.

sch ref

		Asset condition at start of planning period (percentage of units by grade)								Data accuracy		% of asset forecast to be replaced in next 5 years	
8	Operating Pressure	Asset category	Asset class	Units	Grade 1	Grade 2	Grade 3	Grade 4	Grade unknown	(1-4)			
7													
9	Intermediate Pressure	Main pipe	IP PE main pipe	km	-	-	0.00%	99.30%	0.70%	3		-	
10	Intermediate Pressure	Main pipe	IP steel main pipe	km	-	0.01%	79.75%	0.27%	19.97%	3		0.01%	
11	Intermediate Pressure	Main pipe	IP other main pipe	km	-	-	20.93%	-	79.07%	3		-	
12	Intermediate Pressure	Service pipe	IP PE service pipe	km	-	-	66.35%	30.99%	2.67%	3		-	
13	Intermediate Pressure	Service pipe	IP steel service pipe	km	-	-	23.44%	0.38%	76.18%	3		-	
14	Intermediate Pressure	Service pipe	IP other service pipe	km	-	-	95.49%	-	4.51%	3		-	
15	Intermediate Pressure	Stations	Intermediate pressure DRS	No.	1.54%	4.62%	69.23%	24.62%	-	3		6.15%	
16	Intermediate Pressure	Line valve	IP line valves	No.	0.26%	0.12%	45.52%	11.20%	42.89%	3		0.33%	
17	Intermediate Pressure	Special crossings	IP crossings	No.	-	0.60%	97.38%	2.01%	-	3		0.30%	
18	Medium Pressure	Main pipe	MP PE main pipe	km	0.22%	0.03%	91.63%	7.10%	1.01%	3		0.25%	
19	Medium Pressure	Main pipe	MP steel main pipe	km	1.88%	0.01%	78.09%	0.05%	19.97%	3		1.88%	
20	Medium Pressure	Main pipe	MP other main pipe	km	-	0.03%	20.88%	0.02%	79.07%	3		0.01%	
21	Medium Pressure	Service pipe	MP PE service pipe	km	0.20%	0.06%	85.24%	11.78%	2.72%	3		0.27%	
22	Medium Pressure	Service pipe	MP steel service pipe	km	0.02%	0.04%	23.51%	0.07%	76.35%	3		0.06%	
23	Medium Pressure	Service pipe	MP other service pipe	km	-	0.08%	94.94%	0.07%	4.91%	3		0.08%	
24	Medium Pressure	Stations	Medium pressure DRS	No.	7.58%	9.09%	65.15%	18.18%	-	3		16.67%	
25	Medium Pressure	Line valve	MP line valves	No.	-	0.03%	40.54%	16.93%	42.50%	3		0.02%	
26	Medium Pressure	Special crossings	MP special crossings	No.	0.38%	0.29%	97.79%	1.53%	-	3		0.53%	
27	Low Pressure	Main pipe	LP PE main pipe	km	-	-	57.35%	41.95%	0.70%	3		-	
28	Low Pressure	Main pipe	LP steel main pipe	km	-	0.15%	79.97%	0.00%	19.88%	3		0.06%	
29	Low Pressure	Main pipe	LP other main pipe	km	-	-	6.31%	14.62%	79.07%	3		-	
30	Low Pressure	Service pipe	LP PE service pipe	km	-	0.08%	86.70%	10.42%	2.80%	3		0.08%	
31	Low Pressure	Service pipe	LP steel service pipe	km	-	-	23.20%	0.64%	76.17%	3		-	
32	Low Pressure	Service pipe	LP other service pipe	km	-	-	78.78%	16.71%	4.51%	3		-	
33	Low Pressure	Line valve	LP line valves	No.	-	0.06%	31.30%	15.52%	53.13%	3		0.03%	
34	Low Pressure	Special crossings	LP special crossings	No.	-	-	-	-	-	3		-	
35	All	Monitoring and control systems	Remote terminal units	No.	-	30.43%	55.80%	13.77%	-	4		-	
36	All	Cathodic protection systems	Cathodic protection	No.	-	37.50%	29.69%	21.88%	10.94%	3		9.38%	

SCHEDULE 12b: REPORT ON FORECAST UTILISATION

This Schedule requires a breakdown of current and forecast utilisation (for heavily utilised pipelines) consistent with the information provided in the AMP and the demand forecast in schedule S12c.

sch.ref

7 Forecast Utilisation of Heavily Utilised Pipelines

Utilisation

Region	Network	Pressure system	Nominal operating pressure (NOP) (kPa)	Minimum operating pressure (MinOP) (kPa)	Total capacity at MinOP (scmh)	Remaining capacity at MinOP (scmh)	Unit	Current Year CY y/e 30 Sep 21	CY+1 y/e 30 Sep 22	CY+2 y/e 30 Sep 23	CY+3 y/e 30 Sep 24	CY+4 y/e 30 Sep 25	CY+5 y/e 30 Sep 26	Comment
Hawkes Bay	Hastings	Hastings LMP	150	75	1,418	28	scmh	1,418	1,454	1,490	1,526	1,562	1,598	Forecasts for exceeding 50% droop have been pushed out to around FY22 due to a reduction in the domestic growth rate. Design for a phased upgrade is underway. In FY22 the first phase of the upgrade is modelled as an additional MP main to improve supply into Havelock North. If strong growth continues, a second phase to upgrade the main to LIP with a new supply point into Havelock North is expected in RY26.
							kPa	75	65	85	78	70	98	
Hawkes Bay	Hastings	Taradale	150	75	983	48	scmh	927	957	987	1,017	1,047	1,077	Domestic growth is progressing, but at a slower rate than previously forecast. The reduced growth speed is attributed to delays in greenfields development completions. Droop is expected to reach approximately 50% by RY25. A pressure uplift is scheduled for FYE25. The desired NOP after uplift is at least 210kPa potentially allowing merging with the adjacent Napier LMP subsystem. Strong growth in small commercial connections may move works forward by an additional year; monitoring is ongoing.
							kPa	97	93	89	82	153	148	
Hutt Valley/Porirua	Belmont	Belmont LIP	860	430	15,236	111	scmh	15,259	16,110	16,209	16,312	16,424	16,475	Completion of the Upper Hutt and Wallaceville Rationalisations in RY21 saw the shift of LIP low pressure point from Miro Street PRS (Upper Hutt) to Norfolk DRS (Wainuiomata). Droop of 60% is forecast on the Belmont LIP at Norfolk DRS inlet in Wainuiomata in RY26. The Wainuiomata IP Reinforcement project is planned for RY26. Completion of Avalon/Belmont/Kelson Rationalisation project in RY22 sees improvement on LIP network pressures of about 35kPa (even with some additional growth in the year). This improves pressures at Norfolk DRS inlet low point. This project also sees the entire demand for the Kelson, Belmont and Belmont Domain pressure systems converged into one pressure system and shifted from the HIP onto LIP.
							kPa	385	419	396	372	346	457	
Hutt Valley/Porirua	Belmont	Lower Hutt LMP	125	63	7,210	44	scmh	7,216	7,240	7,240	7,240	7,240	7,240	The low pressure constraint on this subsystem is limited to a single branch of the Lower Hutt LMP subsystem. We permanently monitor the lowest point on the constrained branch. Strong infill residential growth in Lower Hutt central may cause a decline in pressure at this extremity. In the event of a decline in pressures a new cocoon in Lower Hutt Central will improve pressures.
							kPa	61	60	60	60	60	60	
Hutt Valley/Porirua	Belmont	Wainuiomata	104	52	1,164	9	scmh	1,150	1,168	1,180	1,192	1,204	1,216	Removal of the Strand DRS (as part of the Wainuiomata Rationalisation project) sees this pressure system become a highly utilised, however pressures are expected to remain within specification over the planning period. The low pressure point is in the south, away from the growth area.
							kPa	59	58	58	58	58	57	
Hutt Valley/Porirua	Waitangirua/Pauatahanui	Elsdon LMP	104	52	389	3	scmh	380	380	400	420	440	447	Unexpectedly poor pressures were found in the second winter after rationalisation. Investigations are underway into the cause. Growth in the form of small subdivisions are expected, but the location of the growth is not expected to impact on the constrained area's performance.
							kPa	61	61	61	61	61	61	
Hutt Valley/Porirua	Waitangirua/Pauatahanui	Pauatahanui IP	1,050	525	1,197	84	scmh	1,104	1,132	1,212	1,277	1,342	1,406	Expected residential growth in Pilmerton will be significant and will exceed the IP capacity if upgrades are not undertaken. A planned FYE23 gas gate pressure uplift to 1500kPa will improve the pressures further as the large subdivision progresses.
							kPa	682	668	1,192	1,118	1,032	932	

25	Manawatu	Palmerston North	Palmerston North LMP	100	50	5,867	6	scmh	5,867	5,934	6,061	6,061	6,137	6,342	To address a number of issues such as low extremity pressures, advanced age regulator stations and large numbers of small stations an East and West (of State Highway 3) rationalisations have been scoped for FYE2023 and FYE2025 respectively.
26								kPa	48	46	59	59	60	60	
27	Manawatu	Palmerston North	Summerhill	100	50.0	532	15	scmh	434	475	515	589	619	669	As the biggest identified area for growth in Palmerston North, we will actively monitor demand and pressure levels. Droop of 60% and pressures approaching the capacity limit are forecast in RY2024 if no action is taken and growth continues as projected. To prevent capacity limits being exceeded it is proposed to raise the NOP to approximately 150kPa in FYE24.
28								kPa	68	65	59	116	109	102	
29	Manawatu	Oroua Downs	Oroua Downs MP	330	165	215	41	scmh	256	256	256	256	256	256	Unexpected commercial growth on this network exceeded the original capacity limit. Small-scale upgrades were undertaken urgently in FYE21. The system is at capacity. If local customers require more gas or greater pressures beyond what was delivered further substantial upgrades will be required.
30								kPa	75	75	75	75	75	75	
31	Taranaki	Inglewood	Inglewood	350	175	588	42	scmh	513	538	561	574	586	597	Inglewood has seen strong residential connection growth pushing this supply into the highly-utilised list. The growth has been mostly infill housing rather than from a significant large subdivision. If strong residential growth persists at current rates upgrades will be performed in approximately FY26 to prevent exceeding MINOP.
32								kPa	212	201	190	183	175	239	
33	Taranaki	New Plymouth	Bell Block North	225	112.5	851	21	scmh	820	886	925	964	1,003	1,042	Strong residential growth occurring in the east of this pressure system sees it become a HUP in RY24. By RY26 we are just above MINOP, with reinforcement expected within the planning period.
34								kPa	154	141	135	129	122	114	
35	Taranaki	New Plymouth	New Plymouth IP	1250	625	7,737	430	scmh	7,845	7,968	8,034	8,109	8,185	8,261	Pressures at the inlet to Tukapa St station are observed near 50% droop at peak. This is not forecast to have any quality of supply impact in the foreseeable future as the regulator station is adequately sized to perform under low inlet pressures. The station is permanently monitored via SCADA.
36								kPa	562	550	542	532	521	510	
37	Taranaki	New Plymouth	New Plymouth MP	245	122.5	5,508	51	scmh	5,519	5,352	5,379	5,415	5,452	5,488	There is a single branch of this network where low pressures have been detected. The localised constraint is due to a relatively long run of a relatively low diameter main supplying industrial customers near Breakwater Road. This is scheduled for upgrade in FY22 (Hutchen Place Reinforcement project) to meet commercial growth needs which will see this localised area become isolated and operate as an independent pressure system within specification. The remainder of the network has pressures within specifications, even considering reasonable residential demand growth, and therefore will no longer remain a HUP following this project.
38								kPa	110	148	147	145	141	137	
39	Taranaki	Patea	Patea	350	175	357	56	scmh	355	355	355	355	355	355	Gas gate volumes through Patea have been slowly trending down for the last 5 years, hence the improvement compared to historical AMP figures. Monitoring is ongoing. Note: new records of the service size of the large commercial customer with the lowest pressure have been located. The service is larger than previously recorded hence the modelled pressure improvement.
40								kPa	178	178	178	178	178	178	
41	Taranaki	Waitara	Lepperton MP	350	175	364	48	scmh	401	401	401	401	401	401	This is a new pressure system that was created when Lepperton was uplifted and separated from Waitara. There are no plans to upgrade capacity further unless demand increases.
42								kPa	85	85	85	85	85	85	

43	Taranaki	Waitara	Waitara MP	250	125	792	57	scmh	768	784	784	784	784	784	784	The supplies to Lepperton and Waitara have been separated. The supply pressure in Lepperton was increased to ease supply constraints in that network. The current Waitara network extremity of the droop is approximately 40%. Monitoring is ongoing. The droop is not projected to worsen significantly as modest rates of residential growth continues in Waitara.
44								kPa	137	137	137	137	137	137	137	
45	Wellington	Tawa A	Chartwell	70	45	234	0	scmh	177	191	211	231	243	245	245	The subdivision growth to the north is expected to be completed in RY25. Some infill growth may continue, but we no longer expect this system to require reinforcement over the planning period. We will monitor the pressure and demand on the network, and increase the NOP if needed.
46								kPa	66	64	58	50	44	44	44	
47	Wellington	Tawa A	Karori	135	67.5	1,766	16	scmh	1,770	1,770	1,770	1,770	1,770	1,770	1,770	Pressures are slightly below MinOP however with minimal infill growth and no forecast subdivision growth, this is running at an acceptable level. However, to replace aging assets and alleviate constraints on the IP feed into Karori, a rationalisation has been tabled for RY23. This will also see pressures in the LMP system improve above MinOP once again.
48								kPa	64	64	72	72	72	72	72	
49	Wellington	Tawa A	Wellington 25 kPa	25	12.5	13,307	22	scmh	13,290	13,360	13,360	13,360	13,360	13,360	13,360	The Wellington CBD pressure upgrade project was completed in RY21 merging with the Wellington 25kPa pressure system. A previously unknown interconnection near the Dover Street DRS has been confirmed and pressure monitoring has also confirmed better than previously expected pressures in Island Bay.
50								kPa	14	14	14	14	14	14	14	The low point is localised within the Thorndon, Wadestown and Northland area of the system, with the system remaining above MinOP over the planning period. We will continue to actively monitor pressures across the system.
	Wellington	Tawa A	Wellington IIP	1200	600	23,524	239	scmh	23,717	23,865	23,987	24,102	24,188	24,265	24,265	The low point on this system is Karori. The Minimum Operating Pressure has been reviewed and set to 335kPa. We will continue to monitor through SCADA. To replace aging Karori assets and alleviate constraints on the IP feed into Karori, a rationalisation has been tabled for RY23. Following this project, the low point shifts to the extremity of the Newtown IIP lateral, with network pressures bordering on MinOP. No further reinforcement is expected over the planning period.
								kPa	406	397	597	594	592	590	590	
51	Wellington	Tawa A	Wellington North	185	92.5	5,083	82	scmh	5,089	5,282	5,492	5,695	5,875	6,057	6,057	The lowest pressure point on the network is at a small regulating station (Butavas St) feeding into the 25kPa network. This is not likely to be impacted by growth, nor is it likely to impact customer pressures. This will be continually monitored and an upgrade to the feed to Butavas DRS will be planned when 60% droop is recorded. Subdivision activity in the region will increase demand. We expect constraints in Churton Park by RY23 and are currently designing an overlay on Westchester Drive in FY22 to be constructed by FY23. Subdivision growth in Grenada Village has slowed and we do not expect the need to reinforce the area (Mark Avenue Overlay) in the next 5 years (48% droop by RY26). This system is being continuously monitored.
52								kPa	89	88	86	84	82	79	79	

* Current year utilisation figures may be estimates. Year 1–5 figures show the utilisation forecast to occur given the expected system configuration for each year, including the effect of any new investment in the pressure system.

Disclaimer for supply enquiries

The information in this table contains modelled estimates of utilisation and capacity. Any interested party seeking to invest in supply from Powerco's distribution networks should contact Powerco or their retailer and confirm availability of capacity.

Notes and assumptions

Growth patterns used reflect our knowledge at the time of writing.
 If the growth is expected to spread over multiple years, it is uniformly spread over that period.
 The number of lots identified is multiplied by 0.6scmh to calculate a diversified load per connection. This is summed and placed at a single point in the model where the load is expected to occur.
 If the growth specified is inferior to our other supply forecasts, we reconcile these by adding the load at one extremity of the network.

Company Name	Powerco Limited
AMP Planning Period	1 October 2021 – 30 September 2031

SCHEDULE 12c: REPORT ON FORECAST DEMAND

This schedule requires a forecast of new connections (by consumer type), peak demand and energy volumes for the disclosure year and a 5 year planning period. The forecasts should be consistent with the supporting information set out in the AMP as well as the assumptions used in developing the expenditure forecasts in Schedule 11a and Schedule 11b and the capacity and utilisation forecasts in Schedule 12b.

sch ref

12c(i) Consumer Connections							
Number of ICPs connected in year by consumer type							
	<i>Consumer types defined by GDB</i>	<i>Current year CY</i> 30 Sep 21	<i>CY+1</i> 30 Sep 22	<i>CY+2</i> 30 Sep 23	<i>CY+3</i> 30 Sep 24	<i>CY+4</i> 30 Sep 25	<i>CY+5</i> 30 Sep 26
7							
8							
9							
10							
11	Residential	2,377	2,231	2,289	2,319	2,348	2,376
12	Commercial / Industrial	92	93	93	93	94	94
13							
14							
15							
16	Total	2,469	2,324	2,382	2,412	2,442	2,470
17							
18	12c(ii): Gas Delivered						
19		<i>Current year CY</i> 30 Sep 21	<i>CY+1</i> 30 Sep 22	<i>CY+2</i> 30 Sep 23	<i>CY+3</i> 30 Sep 24	<i>CY+4</i> 30 Sep 25	<i>CY+5</i> 30 Sep 26
20	Number of ICPs at year end (at year end)	113,207	114,907	116,608	118,307	120,007	121,707
21	Maximum daily load (GJ per day)	42,596	43,405	43,186	42,968	42,750	42,532
22	Maximum monthly load (GJ per month)	981,086	999,713	994,687	989,661	984,636	979,610
23	Number of directly billed ICPs (at year end)	-	-	-	-	-	-
24	Total gas conveyed (GJ per annum)	8,928,726	8,967,468	9,013,890	9,060,313	9,106,735	9,153,158
25	Average daily delivery (GJ per day)	24,462	24,568	24,696	24,755	24,950	25,077
26							
27	Load factor	75.84%	74.75%	75.52%	76.29%	77.07%	77.86%

Schedule 14a: Mandatory Explanatory Notes on Forecast Information

1. This Schedule requires GDBs to provide explanatory notes to reports prepared in accordance with clause 2.6.6.
2. This Schedule is mandatory—GDBs must provide the explanatory comment specified below, in accordance with clause 2.7.2. This information is not part of the audited disclosure information, and so is not subject to the assurance requirements specified in section 2.8.

Commentary on difference between nominal and constant price capital expenditure forecasts (Schedule 11a)

3. In the box below, comment on the difference between nominal and constant price capital expenditure for the disclosure year and the 10-year planning period, as disclosed in Schedule 11a.

Box 1: Commentary on difference between nominal and constant price capital expenditure forecasts

The index used to translate nominal \$ forecasts into constant \$ forecasts is the Statistics NZ CPI (All Groups). The CPI index applied is the annual average rate of increase based on the CPI index predictions included in the NZIER Quarterly Predictions from June 2021.

For example, the index used for the year ending 30 September 2021 is based on the annual average movement using CPI predictions (actuals where available) as follows:

$$(Q1\ RY21 + Q2\ RY21 + Q3\ RY21 + Q4\ RY21) / (Q1\ RY20 + Q2\ RY20 + Q3\ RY20 + Q4\ RY20).$$

Commentary on difference between nominal and constant price operational expenditure forecasts (Schedule 11b)

4. In the box below, comment on the difference between nominal and constant price operational expenditure for the disclosure year, as disclosed in Schedule 11b.

Box 2: Commentary on difference between nominal and constant price operational expenditure forecasts

The index used to translate nominal \$ forecasts into constant \$ forecasts is the Statistics NZ CPI (All Groups). The CPI index applied is the annual average rate of increase based on the CPI index predictions included in the NZIER Quarterly Predictions from June 2021.

For example, the index used for the year ending 30 September 2021 is based on the annual average movement using CPI predictions (actuals where available) as follows:

$$(Q1\ RY21 + Q2\ RY21 + Q3\ RY21 + Q4\ RY21) / (Q1\ RY20 + Q2\ RY20 + Q3\ RY20 + Q4\ RY20).$$

CERTIFICATION FOR YEAR-BEGINNING DISCLOSURES

Pursuant to clause 2.9.1 of Section 2.9

We, John Loughlin and Michael Cummings, being Directors of Powerco Limited certify that, having made all reasonable enquiry, to the best of our knowledge:

- a) the following attached information of Powerco Limited prepared for the purposes of clauses 2.6.1, 2.6.6 and 2.7.2 of the Gas Distribution Information Disclosure Determination 2012 in all material respects complies with that determination.
- b) The prospective financial or non-financial information included in the attached information has been measured on a basis consistent with regulatory requirements or recognised industry standards.
- c) The forecasts in Schedules 11a, 11b, 12a, 12b and 12c are based on objective and reasonable assumptions which both align with Powerco Limited's corporate vision and strategy and are documented in retained records.



Director

19 August 2021

Date



Director

19 August 2021

Date