
UPDATE 2014

POWERCO

# GAS ASSET MANAGEMENT PLAN

Update 2014

# 1 INTRODUCTION

## 1.1 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.

In 2013 we published our first comprehensive Asset Management Plan (2013 AMP). It set out the long-term strategy for the delivery of Powerco's gas distribution services and described, at a practical level, our asset management policies and processes, and the performance we expect and receive from our network assets. It also detailed how we strive to efficiently utilise the resources required to balance the price and service quality trade-offs that our customers tell us they require.

This 2014 Asset Management Plan Update (AMP update) covers the period from 1 October 2014 to 30 September 2024. It builds on last year's plan, and provides the latest information on Powerco's long-term strategy on managing our gas assets.

This AMP update was approved by the Board of Directors on 25 September 2014.

## 1.2 COMPLIANCE WITH INFORMATION DISCLOSURE REQUIREMENTS

This AMP update complies with the Gas Distribution Information Disclosure Determination 2012. 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 2.6.4 and 2.6.5. 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

## 1.3 SUMMARY OF MATERIAL CHANGES

Since publishing the 2013 AMP we have continued to develop and refine our asset management approach including project justification and whole-of-life options analysis. These changes, coupled with delays during the transition to new field service and engineering arrangements, resulted in some projects planned for 2013 and 2014 being deferred or cancelled. Consequently network capital expenditure in 2013 was lower than forecast. The deferred network capital expenditure has altered the expenditure profile but the total across the planning period has not altered significantly.

The projects to increase quality of supply on our main networks (as detailed in our 2013 AMP) were successful. We collected additional information that fed into our network development planning.

There have been a number of minor amendments to network plans, affecting the timing and, in some cases, the solution proposed in the 2013 AMP. These amendments have been made to accommodate changes in sub-division development plans (controlled by others) and advancements in our monitoring and modelling of network performance. The amendments do not materially alter the overall expenditure forecasts.

An increase in non-network capital expenditure is forecast over the 2013-2017 period. The increase is due to bringing forward the implementation of an Enterprise Asset Management (EAM) system to advance our asset management capability, and other IT-related projects that will improve our monitoring and fault-response capability.

We have revised our planning cycle and contractual arrangements to help us to meet our project delivery targets. We have also reviewed the expenditure allocation, especially between the quality of supply and system growth categories, to reflect the better understanding we have on the nature of the improvements projects.

We are continuously improving our Asset Management practices. New operational risk tools are progressively being introduced to optimise our decision-making process. We do not see these initiatives materially affecting the results of our Asset Management Maturity assessment disclosed last year.

There is no material change in our lifecycle asset management plan.

## 1.4 STRUCTURE OF THE 2014 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 2013 AMP.

If the reader seeks detailed information on how Powerco manages its gas assets over the long-term, we would encourage them to revert to the 2013 AMP, available on Powerco's website (www.powerco.co.nz).

This AMP update has 4 sections:

- Section 1 introduces the document
- Section 2 discusses the material changes in the network plans published in Section 8 of the 2013 AMP
- Section 3 provides the justification for the material changes in the expenditure forecasts
- Section 4 provides schedules 11a, 11b, 12a, 12b and 12c

# 2 CHANGES IN NETWORK PLANS

## 2.1 CONTEXT

Powerco operates 35 distribution networks over 5 regions:

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

The two primary drivers for network development are our delivery and efficiency objectives and strategies described in Section 6 of the 2013 AMP. These include aspects such as:

- The rate of demand growth;
- Network capacity and utilisation;
- Network reliability;
- Efficiency and location of stations (DRSs); and
- Optimisation of our investment.

Together, these form the basis for our network development plans.

The 2013 AMP considered projects to 2019. This was reflective of our current knowledge and understanding of the network performance and our planning horizon being less accurate after a five-year horizon.

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 2013 AMP. Changes in the network plans have affected all regions except Hawkes Bay.

## 2.2 WELLINGTON

### 2.2.1 CBD UPGRADE

The CBD pressure upgrade project started in 2013 and was expected to be completed before winter 2014. The project is more complex than anticipated at the planning stage and now won't be completed until 2015. In addition, the overall cost of the project has been revised from $975k to $1,200k. This is because of additional work required to upgrade the safety of the gas metering installations at customer's premises.

### 2.2.2 SYSTEM GROWTH

Growth is occurring in the northern part of the Wellington region but has been slower than expected. We consider this to be a timing issue and still anticipate the forecast system growth associated with new dwellings to occur within our planning timeframes.

We have re-profiled the expenditure profile for system growth accordingly.

## 2.3 HUTT VALLEY AND PORIUA

### 2.3.1 SYSTEM GROWTH

The reticulation of Maymorn Valley has been deferred from 2014 to 2016 (at the earliest). Timing for this development is dictated by the Hutt Valley council so we are relying on its timeframe to start the project and continue to liaise with the council.

## 2.4 TARANAKI

### 2.4.1 CUTFIELD ROAD DRS CAPACITY INCREASE

The Cutfield Rd DRS capacity increase project was identified in the 2013 AMP to increase capacity and supply security with a secondary objective of reducing noise levels from the station.

A detailed design review of this project identified a preferred solution comprising the installation of an additional DRS near the New Plymouth hospital. This solution has the additional benefit of providing sufficient capacity to address future growth forecast in the southern part of the city.

The cost for this revised project is $150k, an increase of ~$90k, and is scheduled for completion in 2015.

## 2.5 MANAWATU AND HOROWHENUA

### 2.5.1 MILSON REINFORCEMENT

Low pressure (<40% of the nominal operating pressure) has been identified in the suburb of Milson in Palmerston North. A river crossing is proposed to increase the pressure to an acceptable level to provide security and accommodate demand growth. The project, scheduled for delivery in 2014, will cost $60k.

### 2.5.2 PALMERSTON NORTH IP EXTENSION

The eastern side of the Palmerston North LMP network relies on a single point of supply located in Robert Line and mainly services residential consumers. We forecast significant growth in this part of the city.

Further monitoring and modelling of this system has identified that the LMP network capacity is limited by the supply pressure to the DRS, which is affected by large industrial loads.

To increase the capacity to this growing area of the city, we will need to extend the intermediate pressure pipeline.

Between 2016 and 2017, we will spend $2,000k to progressively extend the intermediate pressure network along Tremaine Avenue for approximately 2km. This will allow us to install a new point of supply into the medium pressure network, and relieve the station in Roberts Line. It will also be the first step towards the reticulation of the eastern part of the city. This expenditure can be accommodated within the existing capital expenditure forecast.

# 3 CHANGES IN EXPENDITURE FORECASTS

## 3.1 CONTEXT

The 2013 Gas AMP was the first Gas AMP disclosed for our gas business. Since its publication, we have continued to develop and refine our asset management approach. One result of this development is that some projects planned for 2013 and 2014 were deferred to allow more robust analysis and needs cases to be developed.

Additionally the commencement of the DPP period coincided with the new field service arrangements and changes to the engineering and contracts management structure. This transition resulted in some slippage in delivery but has delivered savings through competitive pricing and more efficient management.

Our field service contracts are rates-based. This gives us more certainty of costs on our minor projects. For larger projects, our ability to tender has delivered more competitive prices.

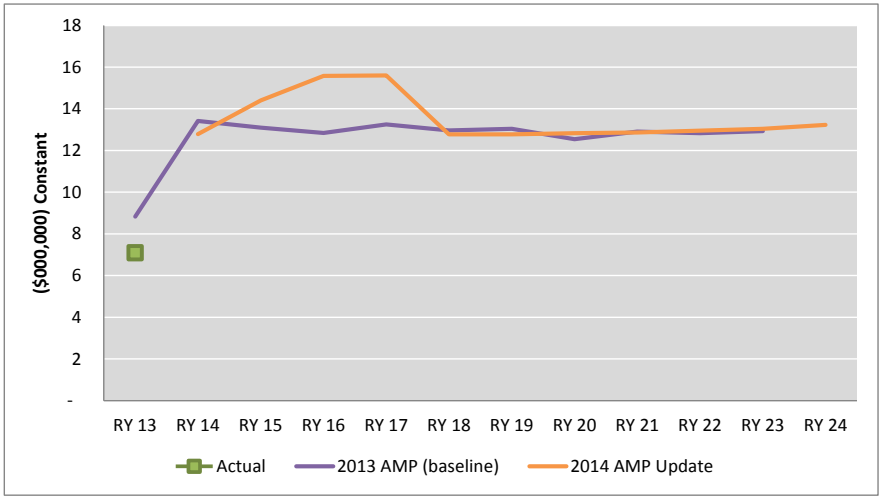
The new cost categories for reporting came into effect for regulatory year 2013. We have changed our financial system and standards to match these partway through the year. With a greater understanding of the intent of these categories, we have reallocated some expenditure between categories.

## 3.2 CAPITAL EXPENDITURE

The overall forecast expenditure for the period 2013-2017 has increased by ~$4m compared to the 2013 AMP. This is primarily due to an increase in non-network capital expenditure.

The forecast network capital expenditure has reduced slightly and the revised project timing has changed the expenditure profile. Additionally there has been a shift between cost categories due to the reclassification of some project expenditure.

**Figure 3.1: Comparison between 2013 AMP, 2014 AMP Update Forecasts, and 2013 Actual Capital Expenditure (Constant $).**




### 3.2.1 NON-NETWORK CAPITAL EXPENDITURE

Non-network capital expenditure forecasts have increased by a total of $4.8m over the 2013-2017 period. This is due to bringing forward the roll-out of the Enterprise Asset Management system to advance our asset management capability, and additional IT related projects that will improve our monitoring and fault-response capability.

### 3.2.2 REVISED TIMING

The expenditure in 2013 was~$2m less than forecasted in the AMP. This is due to:

- Deferrals to allow for more detailed analysis and needs cases to be developed
- Delays in project delivery through the transition period to new field service and engineering

The deferred projects will be carried forward and completed in 2014 and 2015. The revised forecast for network capital expenditure over the period 2013 – 2017 has been slightly reduced to reflect the lower project delivery costs as evidenced in projects completed in the past year.

### 3.2.3 REVISED COST CATEGORIES

The cost categories introduced by the Gas Distribution Information Disclosure Determination 2012 were new to us. The capital works programme, as described in Section 3.2.3.1 of the 2013 AMP, is based on the contents of a network improvement register.

The projects in the improvement register have their cost category pre-allocated when entered into the list. This could be done several years before the execution of the project. We based last year's forecasts on these categories, which did not match the new cost categories.

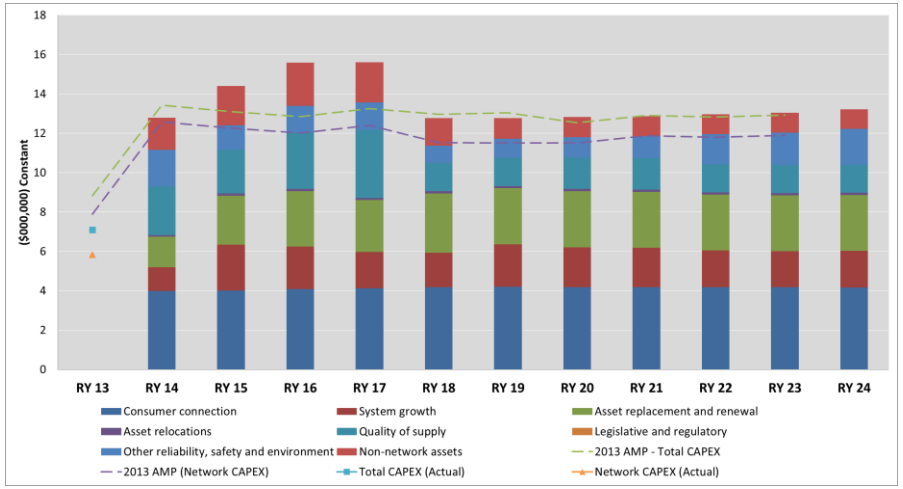
With the experience gained this year, we have reallocated costs between system growth (reduction), quality of supply (higher), and asset replacement and renewal (slightly lower).

The improvement register will go under a full review for the 2015 Gas AMP, and we expect improved allocation accuracy.

### 3.2.4 SUMMARY OF CAPITAL EXPENDITURE

Figure 3.2 below shows the summary of capital expenditure broken down in the different categories. The 2013 AMP forecasts and the 2013 actual have been added for comparison purposes.

**Figure 3.2: 2014 AMP Update Capital Expenditure Summary (Constant $).**




## 3.3 OPERATIONAL EXPENDITURE

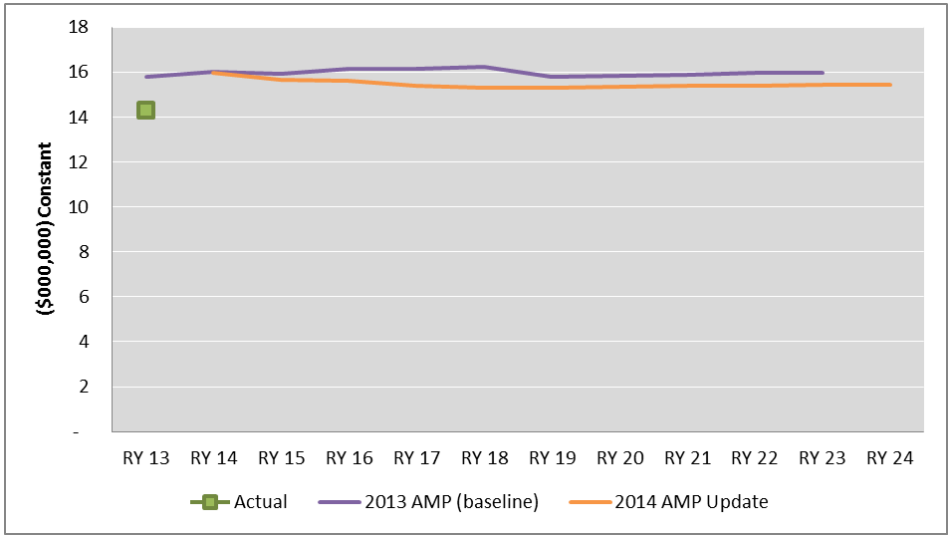
The revised overall operational expenditure is slightly under the forecast of the 2013 AMP over the period 2013-2017. As with capital expenditure, some reallocation between cost categories occurred. The operational expenditure in 2013 was affected by the transition in field service arrangement with some costs being deferred to 2014.

Forecast routine and corrective maintenance and inspection has been revised slightly down. We expect to maintain the level of expenditure broadly constant over the planning period.

Forecast asset replacement and renewal has been reviewed slightly upwards to reduce the number of defects identified on the network.

Figure 3.3 below shows the revised operational expenditure forecast, compared with the 2013 AMP, and the 2014 actual.

**Figure 3.3: Comparison between 2013 AMP, 2014 AMP Update Forecasts, and 2013 Actual Operational Expenditure (Constant $).**



# 4 SCHEDULES

| | |
|---|---|
| *Company Name* | **Powerco Limited** |
| *AMP Planning Period* | **1 October 2014 – 30 September 2024** |

## SCHEDULE 11a: REPORT ON FORECAST CAPITAL EXPENDITURE

This schedule requires a breakdown of forecast expenditure on assets for the current 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. Also required is a forecast of the value of commissioned assets (i.e., the value of RAB additions)
GDBs must provide explanatory comment on the difference between constant price and nominal dollar forecasts of expenditure on assets in Schedule 14a (Mandatory Explanatory Notes).
This information is not part of audited disclosure information.

*sch ref*

| | | *Current Year CY* | *CY+1* | *CY+2* | *CY+3* | *CY+4* | *CY+5* | *CY+6* | *CY+7* | *CY+8* | *CY+9* | *CY+10* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | for year ended | **30 Sep 14** | **30 Sep 15** | **30 Sep 16** | **30 Sep 17** | **30 Sep 18** | **30 Sep 19** | **30 Sep 20** | **30 Sep 21** | **30 Sep 22** | **30 Sep 23** | **30 Sep 24** |
| | **11a(i): Expenditure on Assets Forecast** | **$000 (nominal dollars)** | | | | | | | | | | |
| | Consumer connection | 3,990 | 4,080 | 4,248 | 4,388 | 4,541 | 4,653 | 4,732 | 4,822 | 4,918 | 5,008 | 5,105 |
| | System growth | 1,200 | 2,394 | 2,253 | 1,965 | 1,901 | 2,389 | 2,291 | 2,303 | 2,188 | 2,195 | 2,271 |
| | Asset replacement and renewal | 1,550 | 2,533 | 2,941 | 2,813 | 3,272 | 3,164 | 3,218 | 3,279 | 3,344 | 3,406 | 3,471 |
| | Asset relocations | 76 | 115 | 118 | 120 | 124 | 127 | 129 | 131 | 134 | 136 | 139 |
| | Reliability, safety and environment: | | | | | | | | | | | |
| | Quality of supply | 2,473 | 2,259 | 2,983 | 3,676 | 1,544 | 1,582 | 1,801 | 1,836 | 1,672 | 1,703 | 1,736 |
| | Legislative and regulatory | - | - | - | - | - | - | - | - | - | - | - |
| | Other reliability, safety and environment | 1,873 | 1,258 | 1,412 | 1,485 | 973 | 1,070 | 1,177 | 1,309 | 1,802 | 1,998 | 2,235 |
| | **Total reliability, safety and environment** | 4,347 | 3,517 | 4,395 | 5,161 | 2,517 | 2,652 | 2,979 | 3,145 | 3,474 | 3,701 | 3,971 |
| | **Expenditure on network assets** | 11,163 | 12,639 | 13,955 | 14,447 | 12,356 | 12,984 | 13,348 | 13,679 | 14,059 | 14,446 | 14,957 |
| | Non-network assets | 1,620 | 2,045 | 2,275 | 2,171 | 1,522 | 1,178 | 1,163 | 1,159 | 1,182 | 1,206 | 1,230 |
| | **Expenditure on assets** | 12,783 | 14,684 | 16,231 | 16,618 | 13,878 | 14,162 | 14,511 | 14,839 | 15,241 | 15,652 | 16,187 |
| | | | | | | | | | | | | |
| *plus* | Cost of financing | - | 15 | 31 | 32 | 31 | 31 | 32 | 33 | 34 | 35 | 36 |
| *less* | Value of capital contributions | 542 | 610 | 626 | 640 | 653 | 667 | 680 | 693 | 707 | 721 | 736 |
| *plus* | Value of vested assets | - | - | - | - | - | - | - | - | - | - | - |
| | **Capital expenditure forecast** | 12,241 | 14,089 | 15,635 | 16,010 | 13,255 | 13,527 | 13,863 | 14,179 | 14,568 | 14,965 | 15,486 |
| | | | | | | | | | | | | |
| | Value of commissioned assets | 11,629 | 13,996 | 15,558 | 15,991 | 13,393 | 13,513 | 13,846 | 14,163 | 14,548 | 14,945 | 15,460 |
| | | | | | | | | | | | | |
| | | *Current Year CY* | *CY+1* | *CY+2* | *CY+3* | *CY+4* | *CY+5* | *CY+6* | *CY+7* | *CY+8* | *CY+9* | *CY+10* |
| | for year ended | **30 Sep 14** | **30 Sep 15** | **30 Sep 16** | **30 Sep 17** | **30 Sep 18** | **30 Sep 19** | **30 Sep 20** | **30 Sep 21** | **30 Sep 22** | **30 Sep 23** | **30 Sep 24** |
| | | **$000 (in constant prices)** | | | | | | | | | | |
| | Consumer connection | 3,990 | 4,001 | 4,078 | 4,118 | 4,179 | 4,197 | 4,185 | 4,181 | 4,181 | 4,174 | 4,171 |
| | System growth | 1,200 | 2,347 | 2,162 | 1,845 | 1,749 | 2,155 | 2,026 | 1,997 | 1,860 | 1,829 | 1,856 |
| | Asset replacement and renewal | 1,550 | 2,484 | 2,823 | 2,640 | 3,011 | 2,854 | 2,846 | 2,843 | 2,843 | 2,838 | 2,836 |
| | Asset relocations | 76 | 113 | 113 | 112 | 114 | 114 | 114 | 114 | 114 | 114 | 113 |
| | Reliability, safety and environment: | | | | | | | | | | | |
| | Quality of supply | 2,473 | 2,216 | 2,864 | 3,450 | 1,421 | 1,427 | 1,593 | 1,592 | 1,422 | 1,419 | 1,418 |
| | Legislative and regulatory | - | - | - | - | - | - | - | - | - | - | - |
| | Other reliability, safety and environment | 1,873 | 1,234 | 1,355 | 1,394 | 896 | 965 | 1,041 | 1,135 | 1,532 | 1,665 | 1,826 |
| | **Total reliability, safety and environment** | 4,347 | 3,449 | 4,219 | 4,844 | 2,316 | 2,392 | 2,635 | 2,727 | 2,954 | 3,084 | 3,245 |
| | **Expenditure on network assets** | 11,163 | 12,395 | 13,395 | 13,559 | 11,369 | 11,713 | 11,805 | 11,861 | 11,951 | 12,039 | 12,221 |
| | Non-network assets | 1,620 | 2,006 | 2,184 | 2,038 | 1,401 | 1,063 | 1,029 | 1,005 | 1,005 | 1,005 | 1,005 |
| | **Expenditure on assets** | 12,783 | 14,400 | 15,579 | 15,597 | 12,770 | 12,776 | 12,834 | 12,866 | 12,957 | 13,044 | 13,226 |
| | | | | | | | | | | | | |
| | **Subcomponents of expenditure on assets (where known)** | | | | | | | | | | | |
| | Research and development | - | - | - | - | - | - | - | - | - | - | - |

| | | Current Year CY | CY+1 | CY+2 | CY+3 | CY+4 | CY+5 | CY+6 | CY+7 | CY+8 | CY+9 | CY+10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| for year ended | | 30 Sep 14 | 30 Sep 15 | 30 Sep 16 | 30 Sep 17 | 30 Sep 18 | 30 Sep 19 | 30 Sep 20 | 30 Sep 21 | 30 Sep 22 | 30 Sep 23 | 30 Sep 24 |
| **Difference between nominal and constant price forecasts** | | $000 | | | | | | | | | | |
| Consumer connection | | - | 79 | 171 | 270 | 363 | 455 | 547 | 641 | 737 | 834 | 934 |
| System growth | | - | 47 | 90 | 121 | 152 | 234 | 265 | 306 | 328 | 366 | 415 |
| Asset replacement and renewal | | - | 49 | 118 | 173 | 261 | 310 | 372 | 436 | 501 | 567 | 635 |
| Asset relocations | | - | 2 | 4 | 7 | 10 | 12 | 15 | 17 | 20 | 23 | 25 |
| Reliability, safety and environment: | | | | | | | | | | | | |
| Quality of supply | | - | 44 | 120 | 226 | 123 | 155 | 208 | 244 | 251 | 284 | 317 |
| Legislative and regulatory | | - | - | - | - | - | - | - | - | - | - | - |
| Other reliability, safety and environment | | - | 24 | 57 | 91 | 78 | 105 | 136 | 174 | 270 | 333 | 409 |
| **Total reliability, safety and environment** | | - | 68 | 176 | 317 | 201 | 260 | 344 | 418 | 521 | 616 | 726 |
| **Expenditure on network assets** | | - | 244 | 560 | 887 | 986 | 1,271 | 1,543 | 1,818 | 2,108 | 2,406 | 2,736 |
| Non-network assets | | - | 39 | 91 | 133 | 122 | 115 | 134 | 154 | 177 | 201 | 225 |
| **Expenditure on assets** | | - | 283 | 651 | 1,021 | 1,108 | 1,386 | 1,677 | 1,972 | 2,285 | 2,607 | 2,961 |

| | | Current Year CY | CY+1 | CY+2 | CY+3 | CY+4 | CY+5 |
|---|---|---|---|---|---|---|---|
| **11a(ii): Consumer Connection** | for year ended | 30 Sep 14 | 30 Sep 15 | 30 Sep 16 | 30 Sep 17 | 30 Sep 18 | 30 Sep 19 |
| *Consumer types defined by GDB** | | $000 (in constant prices) | | | | | |
| Residential / Small Commercial | | 3,527 | 3,537 | 3,614 | 3,657 | 3,712 | 3,729 |
| Commercial | | 378 | 379 | 379 | 377 | 381 | 383 |
| Industrial | | 86 | 85 | 85 | 84 | 85 | 86 |
| - | | - | - | - | - | - | - |
| - | | - | - | - | - | - | - |
| * include additional rows if needed | | | | | | | |
| **Consumer connection expenditure** | | 3,990 | 4,001 | 4,078 | 4,118 | 4,179 | 4,197 |
| *less* Capital contributions funding consumer connection | | 542 | 599 | 601 | 601 | 601 | 601 |
| **Consumer connection less capital contributions** | | 3,449 | 3,402 | 3,477 | 3,518 | 3,578 | 3,596 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **11a(iii): System Growth** | | | | | | | |
| **Intermediate pressure** | | | | | | | |
| Main pipe | 41 | 79 | 393 | 63 | 60 | 74 | |
| Service pipe | 17 | 33 | 23 | 26 | 25 | 31 | |
| Stations | - | - | 226 | - | - | - | |
| Line valve | 1 | 1 | 1 | 1 | 1 | 1 | |
| Special crossings | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Intermediate Pressure total** | 59 | 113 | 643 | 90 | 86 | 106 | |
| **Medium pressure** | | | | | | | |
| Main pipe | 785 | 1,511 | 1,045 | 1,206 | 1,144 | 1,409 | |
| Service pipe | 329 | 633 | 438 | 506 | 479 | 591 | |
| Stations | - | - | - | - | - | - | |
| Line valve | 12 | 24 | 16 | 19 | 18 | 22 | |
| Special crossings | 1 | 1 | 1 | 1 | 1 | 1 | |
| **Medium Pressure total** | 1,127 | 2,169 | 1,500 | 1,732 | 1,642 | 2,023 | |
| **Low Pressure** | | | | | | | |
| Main pipe | 10 | 20 | 14 | 16 | 15 | 19 | |
| Service pipe | 4 | 8 | 6 | 7 | 6 | 8 | |
| Line valve | 0 | 0 | 0 | 0 | 0 | 0 | |
| Special crossings | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Low Pressure total** | 15 | 29 | 20 | 23 | 22 | 27 | |
| **Other assets** | | | | | | | |
| Monitoring and control systems | - | 37 | - | - | - | - | |
| Cathodic protection systems | - | - | - | - | - | - | |
| Other assets (other than above) | - | - | - | - | - | - | |
| **Other total** | - | 37 | - | - | - | - | |
| **System growth expenditure** | 1,200 | 2,347 | 2,162 | 1,845 | 1,749 | 2,155 | |
| *less* Capital contributions funding system growth | - | - | - | - | - | - | |
| **System growth less capital contributions** | 1,200 | 2,347 | 2,162 | 1,845 | 1,749 | 2,155 | |

## 11a(iv): Asset Replacement and Renewal

| for year ended | Current Year CY 30 Sep 14 | CY+1 30 Sep 15 | CY+2 30 Sep 16 | CY+3 30 Sep 17 | CY+4 30 Sep 18 | CY+5 30 Sep 19 |
|---|---|---|---|---|---|---|
| **Intermediate pressure** | **$000 (in constant prices)** | | | | | |
| Main pipe | 19 | 23 | 46 | 46 | 58 | 58 |
| Service pipe | 8 | 10 | 19 | 19 | 24 | 24 |
| Stations | 43 | 318 | - | - | - | - |
| Line valve | 257 | 526 | 1 | 1 | 1 | 1 |
| Special crossings | 98 | 259 | 0 | 0 | 0 | 0 |
| **Intermediate Pressure total** | 425 | 1,136 | 66 | 66 | 84 | 84 |
| **Medium pressure** | | | | | | |
| Main pipe | 729 | 665 | 1,682 | 1,674 | 1,916 | 1,924 |
| Service pipe | 305 | 497 | 705 | 702 | 803 | 806 |
| Station | 56 | - | - | - | - | - |
| Line valve | 20 | 7 | 14 | 14 | 18 | 18 |
| Special crossings | 0 | 0 | 1 | 1 | 1 | 1 |
| **Medium Pressure total** | 1,111 | 1,168 | 2,401 | 2,390 | 2,737 | 2,749 |
| **Low Pressure** | | | | | | |
| Main pipe | 5 | 6 | 12 | 12 | 15 | 15 |
| Service pipe | 2 | 2 | 5 | 5 | 6 | 6 |
| Line valve | 0 | 0 | 0 | 0 | 0 | 0 |
| Special crossings | 0 | 0 | 0 | 0 | 0 | 0 |
| **Low Pressure total** | 7 | 8 | 17 | 17 | 21 | 21 |
| **Other assets** | | | | | | |
| Monitoring and control systems | - | - | - | - | - | - |
| Cathodic protection systems | 7 | 171 | 339 | 168 | 170 | - |
| Other assets (other than above) | - | - | - | - | - | - |
| **Other total** | 7 | 171 | 339 | 168 | 170 | - |
| **Asset replacement and renewal expenditure** | 1,550 | 2,484 | 2,823 | 2,640 | 3,011 | 2,854 |
| *less* Capital contributions funding asset replacement and renewal | - | - | - | - | - | - |
| **Asset replacement and renewal less capital contributions** | 1,550 | 2,484 | 2,823 | 2,640 | 3,011 | 2,854 |

## 11a(v): Asset Relocations

| *Project or programme** | | | | | | |
|---|---|---|---|---|---|---|
| Nil | - | - | - | - | - | - |
| - | - | - | - | - | - | - |
| - | - | - | - | - | - | - |
| - | - | - | - | - | - | - |
| - | - | - | - | - | - | - |

** include additional rows if needed*

| | | | | | | |
|---|---|---|---|---|---|---|
| All other asset relocations projects or programmes | 76 | 113 | 113 | 112 | 114 | 114 |
| **Asset relocations expenditure** | 76 | 113 | 113 | 112 | 114 | 114 |
| *less* Capital contributions funding asset relocations | - | - | - | - | - | - |
| **Asset relocations less capital contributions** | 76 | 113 | 113 | 112 | 114 | 114 |

| | | Current Year CY | CY+1 | CY+2 | CY+3 | CY+4 | CY+5 |
|---|---|---|---|---|---|---|---|
| | for year ended | 30 Sep 14 | 30 Sep 15 | 30 Sep 16 | 30 Sep 17 | 30 Sep 18 | 30 Sep 19 |
| **11a(vi): Quality of Supply** | | | | | | | |
| *Project or programme** | | **$000 (in constant prices)** | | | | | |
| Milson reinforcement (Manawatu) | | 67 | - | - | - | - | - |
| Bell Block - Links Drive transfer (Taranaki) | | - | 112 | - | - | - | - |
| Waterloo DRS replacement (Hutt Valley - Porirua) | | 92 | 279 | - | - | - | - |
| Base Hospital DRS installation (Taranaki) | | - | 168 | - | - | - | - |
| Wellington CBD Upgrade (Wellington) | | 802 | 425 | - | - | - | - |
| Huatoki Street Looping (Taranaki) | | - | - | 68 | - | - | - |
| Ferndale Southern looping (Taranaki) | | - | - | 248 | 405 | - | - |
| Hokowhitu reinforcement (Manawatu) | | - | - | 565 | - | - | - |
| Palmerston North IP extension (Manawatu) | | - | - | 571 | 1,630 | - | - |
| DRS flow measurement equipement (All regions) | | 57 | 348 | 282 | 281 | 284 | 285 |
| Eastbourne pressure upgrade (Hutt Valley - Porirua) | | 276 | - | - | - | - | - |
| Whitby (Mana) Reinforcement (Hutt Valley - Porirua) | | 897 | - | - | - | - | - |
| ** include additional rows if needed* | | | | | | | |
| All other quality of supply projects or programmes | | 282 | 884 | 1,129 | 1,135 | 1,137 | 1,142 |
| **Quality of supply expenditure** | | 2,473 | 2,216 | 2,864 | 3,450 | 1,421 | 1,427 |
| *less* Capital contributions funding quality of supply | | - | - | - | - | - | - |
| **Quality of supply less capital contributions** | | 2,473 | 2,216 | 2,864 | 3,450 | 1,421 | 1,427 |
| **11a(vii): Legislative and Regulatory** | | | | | | | |
| *Project or programme* | | | | | | | |
| Nil | | - | - | - | - | - | - |
| - | | - | - | - | - | - | - |
| - | | - | - | - | - | - | - |
| - | | - | - | - | - | - | - |
| - | | - | - | - | - | - | - |
| ** include additional rows if needed* | | | | | | | |
| All other legislative and regulatory projects or programmes | | - | - | - | - | - | - |
| **Legislative and regulatory expenditure** | | - | - | - | - | - | - |
| *less* Capital contributions funding legislative and regulatory | | - | - | - | - | - | - |
| **Legislative and regulatory less capital contributions** | | - | - | - | - | - | - |
| **11a(viii): Other Reliability, Safety and Environment** | | | | | | | |
| *Project or programme** | | | | | | | |
| DRS protection programme (All regions) | | 201 | 706 | 1,129 | 1,124 | 568 | 571 |
| Hyderabad Road IP pipe realignment (Hawkes Bay) | | - | 279 | - | - | - | - |
| IP signage renewal (All regions) | | 503 | - | - | - | - | - |
| Westshore (Hawkes Bay) | | 502 | - | - | - | - | - |
| - | | | | | | | |
| ** include additional rows if needed* | | | | | | | |
| All other reliability, safety and environment projects or programmes | | 667 | 248 | 226 | 270 | 327 | 395 |
| **Other reliability, safety and environment expenditure** | | 1,873 | 1,234 | 1,355 | 1,394 | 896 | 965 |
| *less* Capital contributions funding other reliability, safety and environment | | - | - | - | - | - | - |
| **Other Reliability, safety and environment less capital contributions** | | 1,873 | 1,234 | 1,355 | 1,394 | 896 | 965 |

## 11a(ix): Non-Network Assets

### Routine expenditure

*Project or programme**

| | | | | | | |
|---|---|---|---|---|---|---|
| Nil | - | - | - | - | - | - |
| - | - | - | - | - | - | - |
| - | - | - | - | - | - | - |
| - | - | - | - | - | - | - |
| - | - | - | - | - | - | - |

** include additional rows if needed*

| | | | | | | |
|---|---|---|---|---|---|---|
| All other routine expenditure projects or programmes | 1,620 | 1,960 | 1,537 | 1,173 | 1,129 | 1,063 |
| **Routine expenditure** | 1,620 | 1,960 | 1,537 | 1,173 | 1,129 | 1,063 |

### Atypical expenditure

*Project or programme**

| | | | | | | |
|---|---|---|---|---|---|---|
| Enterprise Asset Management System | - | 46 | 646 | 865 | 272 | - |
| - | - | - | - | - | - | - |
| - | - | - | - | - | - | - |
| - | - | - | - | - | - | - |
| - | - | - | - | - | - | - |

** include additional rows if needed*

| | | | | | | |
|---|---|---|---|---|---|---|
| All other atypical expenditure projects or programmes | - | - | - | - | - | - |
| **Atypical expenditure** | - | 46 | 646 | 865 | 272 | - |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Non-network assets expenditure** | 1,620 | 2,006 | 2,184 | 2,038 | 1,401 | 1,063 |

| | |
|---|---|
| *Company Name* | **Powerco Limited** |
| *AMP Planning Period* | **1 October 2014 – 30 September 2024** |

## 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* | *CY+1* | *CY+2* | *CY+3* | *CY+4* | *CY+5* | *CY+6* | *CY+7* | *CY+8* | *CY+9* | *CY+10* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | for year ended | **30 Sep 14** | **30 Sep 15** | **30 Sep 16** | **30 Sep 17** | **30 Sep 18** | **30 Sep 19** | **30 Sep 20** | **30 Sep 21** | **30 Sep 22** | **30 Sep 23** | **30 Sep 24** |
| | **Operational Expenditure Forecast** | **$000 (in nominal dollars)** | | | | | | | | | | |
| | Service interruptions, incidents and emergencies | 349 | 357 | 367 | 377 | 387 | 396 | 406 | 417 | 427 | 438 | 449 |
| | Routine and corrective maintenance and inspection | 1,968 | 1,854 | 1,904 | 1,956 | 2,006 | 2,056 | 2,107 | 2,160 | 2,215 | 2,270 | 2,327 |
| | Asset replacement and renewal | 3,135 | 3,030 | 3,111 | 3,198 | 3,278 | 3,360 | 3,445 | 3,531 | 3,620 | 3,711 | 3,804 |
| | **Network opex** | 5,452 | 5,241 | 5,382 | 5,531 | 5,670 | 5,813 | 5,959 | 6,108 | 6,261 | 6,419 | 6,580 |
| | System operations and network support | 3,510 | 3,615 | 3,752 | 3,806 | 3,952 | 3,992 | 4,039 | 4,120 | 4,202 | 4,286 | 4,372 |
| | Business support | 7,025 | 7,108 | 7,153 | 7,036 | 6,995 | 7,174 | 7,350 | 7,497 | 7,647 | 7,800 | 7,956 |
| | **Non-network opex** | 10,534 | 10,723 | 10,905 | 10,843 | 10,947 | 11,166 | 11,389 | 11,617 | 11,850 | 12,087 | 12,328 |
| | **Operational expenditure** | 15,986 | 15,964 | 16,287 | 16,374 | 16,617 | 16,979 | 17,348 | 17,725 | 18,111 | 18,505 | 18,908 |

| | | *Current year CY* | *CY+1* | *CY+2* | *CY+3* | *CY+4* | *CY+5* | *CY+6* | *CY+7* | *CY+8* | *CY+9* | *CY+10* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | for year ended | **30 Sep 14** | **30 Sep 15** | **30 Sep 16** | **30 Sep 17** | **30 Sep 18** | **30 Sep 19** | **30 Sep 20** | **30 Sep 21** | **30 Sep 22** | **30 Sep 23** | **30 Sep 24** |
| | | **$000 (in constant prices)** | | | | | | | | | | |
| | Service interruptions, incidents and emergencies | 349 | 351 | 352 | 354 | 356 | 358 | 359 | 361 | 363 | 365 | 367 |
| | Routine and corrective maintenance and inspection | 1,968 | 1,818 | 1,827 | 1,836 | 1,845 | 1,855 | 1,864 | 1,873 | 1,883 | 1,892 | 1,901 |
| | Asset replacement and renewal | 3,135 | 2,972 | 2,986 | 3,001 | 3,016 | 3,031 | 3,047 | 3,062 | 3,077 | 3,093 | 3,108 |
| | **Network opex** | 5,452 | 5,140 | 5,166 | 5,192 | 5,218 | 5,244 | 5,270 | 5,296 | 5,323 | 5,349 | 5,376 |
| | System operations and network support | 3,510 | 3,545 | 3,601 | 3,572 | 3,636 | 3,601 | 3,572 | 3,572 | 3,572 | 3,572 | 3,572 |
| | Business support | 7,025 | 6,971 | 6,866 | 6,604 | 6,437 | 6,472 | 6,501 | 6,501 | 6,501 | 6,501 | 6,501 |
| | **Non-network opex** | 10,534 | 10,516 | 10,467 | 10,177 | 10,073 | 10,073 | 10,073 | 10,073 | 10,073 | 10,073 | 10,073 |
| | **Operational expenditure** | 15,986 | 15,656 | 15,633 | 15,368 | 15,291 | 15,317 | 15,343 | 15,369 | 15,396 | 15,422 | 15,449 |
| | **Subcomponents of operational expenditure (where known)** | | | | | | | | | | | |
| | Research and development | - | - | - | - | - | - | - | - | - | - | - |
| | Insurance | 268 | 289 | 303 | 318 | 334 | 351 | 368 | 387 | 406 | 426 | 448 |

| | | *Current year CY* | *CY+1* | *CY+2* | *CY+3* | *CY+4* | *CY+5* | *CY+6* | *CY+7* | *CY+8* | *CY+9* | *CY+10* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | for year ended | **30 Sep 14** | **30 Sep 15** | **30 Sep 16** | **30 Sep 17** | **30 Sep 18** | **30 Sep 19** | **30 Sep 20** | **30 Sep 21** | **30 Sep 22** | **30 Sep 23** | **30 Sep 24** |
| | **Difference between nominal and real forecasts** | **$000** | | | | | | | | | | |
| | Service interruptions, incidents and emergencies | - | 7 | 15 | 23 | 31 | 39 | 47 | 55 | 64 | 73 | 82 |
| | Routine and corrective maintenance and inspection | - | 36 | 76 | 120 | 160 | 201 | 244 | 287 | 332 | 378 | 426 |
| | Asset replacement and renewal | - | 58 | 125 | 196 | 262 | 329 | 398 | 469 | 543 | 618 | 696 |
| | **Network opex** | - | 101 | 216 | 340 | 453 | 569 | 689 | 812 | 939 | 1,069 | 1,204 |
| | System operations and network support | - | 70 | 151 | 234 | 315 | 391 | 467 | 548 | 630 | 714 | 800 |
| | Business support | - | 137 | 287 | 432 | 558 | 702 | 849 | 996 | 1,146 | 1,299 | 1,455 |
| | **Non-network opex** | - | 207 | 438 | 666 | 874 | 1,093 | 1,316 | 1,544 | 1,776 | 2,013 | 2,255 |
| | **Operational expenditure** | - | 308 | 654 | 1,006 | 1,327 | 1,662 | 2,005 | 2,356 | 2,715 | 3,083 | 3,459 |

| | |
|---|---|
| *Company Name* | **Powerco Limited** |
| *AMP Planning Period* | **1 October 2014 – 30 September 2024** |

## 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) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | **Operating Pressure** | **Asset category** | **Asset class** | **Units** | **Grade 1** | **Grade 2** | **Grade 3** | **Grade 4** | **Grade unknown** | **Data accuracy (1–4)** | **% of asset forecast to be replaced in next 5 years** |
| 9 | Intermediate Pressure | Main pipe | IP PE main pipe | km | - | - | 18.81% | 80.39% | 0.80% | 3 | 0.00% |
| 10 | Intermediate Pressure | Main pipe | IP steel main pipe | km | 0.06% | - | 79.88% | 0.27% | 19.79% | 3 | 0.06% |
| 11 | Intermediate Pressure | Main pipe | IP other main pipe | km | - | - | 25.06% | 0.23% | 74.71% | 3 | 0.00% |
| 12 | Intermediate Pressure | Service pipe | IP PE service pipe | km | - | - | 81.43% | 14.45% | 4.12% | 3 | 0.00% |
| 13 | Intermediate Pressure | Service pipe | IP steel service pipe | km | - | 0.01% | 24.54% | 0.91% | 74.53% | 3 | 0.01% |
| 14 | Intermediate Pressure | Service pipe | IP other service pipe | km | - | - | 93.88% | 1.73% | 4.39% | 3 | 0.00% |
| 15 | Intermediate Pressure | Stations | Intermediate pressure DRS | No. | 3.49% | 3.49% | 77.33% | 12.21% | 3.49% | 2 | 6.98% |
| 16 | Intermediate Pressure | Line valve | IP line valves | No. | 0.43% | 0.78% | 55.72% | 8.52% | 34.55% | 2 | 0.82% |
| 17 | Intermediate Pressure | Special crossings | IP crossings | No. | - | 2.07% | 75.29% | 0.29% | 22.36% | 2 | 1.03% |
| 18 | Medium Pressure | Main pipe | MP PE main pipe | km | 0.02% | 0.02% | 88.87% | 10.30% | 0.80% | 3 | 0.03% |
| 19 | Medium Pressure | Main pipe | MP steel main pipe | km | 0.08% | 0.01% | 79.94% | 0.18% | 19.79% | 3 | 0.09% |
| 20 | Medium Pressure | Main pipe | MP other main pipe | km | - | - | 25.15% | 0.14% | 74.71% | 3 | 0.00% |
| 21 | Medium Pressure | Service pipe | MP PE service pipe | km | 0.02% | 0.03% | 83.80% | 12.03% | 4.12% | 3 | 0.05% |
| 22 | Medium Pressure | Service pipe | MP steel service pipe | km | - | 0.02% | 25.35% | 0.11% | 74.52% | 3 | 0.02% |
| 23 | Medium Pressure | Service pipe | MP other service pipe | km | - | 0.01% | 91.91% | 3.69% | 4.39% | 3 | 0.01% |
| 24 | Medium Pressure | Stations | Medium pressure DRS | No. | - | - | 85.11% | 7.45% | 7.45% | 2 | 0.00% |
| 25 | Medium Pressure | Line valve | MP line valves | No. | - | 0.67% | 49.21% | 15.60% | 34.51% | 2 | 0.34% |
| 26 | Medium Pressure | Special crossings | MP special crossings | No. | 0.39% | 2.98% | 64.02% | 3.02% | 29.59% | 2 | 1.88% |
| 27 | Low Pressure | Main pipe | LP PE main pipe | km | - | 0.01% | 92.25% | 6.95% | 0.80% | 3 | 0.01% |
| 28 | Low Pressure | Main pipe | LP steel main pipe | km | - | - | 80.19% | 0.02% | 19.79% | 3 | 0.00% |
| 29 | Low Pressure | Main pipe | LP other main pipe | km | - | - | 25.26% | 0.03% | 74.71% | 3 | 0.00% |
| 30 | Low Pressure | Service pipe | LP PE service pipe | km | - | 0.13% | 85.38% | 10.38% | 4.12% | 3 | 0.13% |
| 31 | Low Pressure | Service pipe | LP steel service pipe | km | - | - | 25.17% | 0.29% | 74.54% | 3 | 0.00% |
| 32 | Low Pressure | Service pipe | LP other service pipe | km | - | - | 89.55% | 6.06% | 4.39% | 3 | 0.00% |
| 33 | Low Pressure | Line valve | LP line valves | No. | - | 0.31% | 35.33% | 28.31% | 36.04% | 2 | 0.16% |
| 34 | Low Pressure | Special crossings | LP special crossings | No. | - | - | 90.03% | 0.33% | 9.63% | 2 | 0.00% |
| 35 | All | Monitoring & control systems | Remote terminal units | No. | - | - | - | 100.00% | - | 4 | 0.00% |
| 36 | All | Cathodic protection systems | Cathodic protection | No. | - | 16.27% | 46.78% | 6.44% | 30.51% | 3 | 8.14% |

| | |
|---|---|
| *Company Name* | **Powerco Limited** |
| *AMP Planning Period* | **1 October 2014 – 30 September 2024** |

## 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*

**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 14 | *CY+1* y/e 30 Sep 15 | *CY+2* y/e 30 Sep 16 | *CY+3* y/e 30 Sep 17 | *CY+4* y/e 30 Sep 18 | *CY+5* y/e 30 Sep 19 | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wellington | Tawa A | Wellington CBD | 10 | 6 | 5,010 | 32 | scmh | 5047 | 3391 | 3391 | 3391 | 3391 | 3391 | ########## |
| | | | | | | | kPa | 2.16 | 3.506 | 3.506 | 3.506 | 3.506 | 3.506 | |
| Wellington | Tawa A | Wellington IP | 1,200 | 300 | 23,832 | 1,181 | scmh | 24302 | 24452 | 24602 | 24752 | 25127 | 25197 | The Wellington IP network is currently performing at the |
| | | | | | | | kPa | 338 | 333 | 328 | 314 | 310 | 305 | required standard. The minimum operating pressure prescribed |
| Wellington | Tawa A | Wellington 25kPa | 25 | 15 | 6,766 | 71 | scmh | 6787 | 8282 | 8767 | 8767 | 8767 | 8767 | The Wellington 25kPa will be affected by the transfer of the |
| | | | | | | | kPa | 11.9 | 10.5 | 12.1 | 12.1 | 12.1 | 12.1 | Terrace and Kelburn areas from the Wellington CBD pressure |
| Wellington | Tawa A | Wellington North | 185 | 111 | 3,812 | 190 | scmh | 3802 | 4106 | 4202 | 4298 | 4394 | 4490 | ########## |
| | | | | | | | kPa | 95 | 95 | 95 | 95 | 95 | 95 | |
| Hutt Valley/Porirua | Waitangirua/ Pauatahanui | Plimmerton IP | 1,200 | 300 | 915 | 123 | scmh | 849 | 921 | 994 | 1063 | 1118 | 1179 | The Whitby project which took place last year increased the |
| | | | | | | | kPa | 593 | 495 | 374 | 261 | 256 | 199 | capacity of this system. Studies are underway to confirm the |
| Taranaki | Manaia | Manaia | 340 | 204 | 144 | 60 | scmh | 169 | 169 | 169 | 169 | 169 | 169 | This pressure system is dependent on a single commercial |
| | | | | | | | kPa | 149 | 149 | 149 | 149 | 149 | 149 | consumer. We do not expect any increase in the demand on this |
| Taranaki | New Plymouth | Bell Block North | 240 | 144 | 541 | 75 | scmh | 541 | 507 | 517 | 602 | 687 | 772 | With the growth happening at the extremity of this pressure |
| | | | | | | | kPa | 144 | 179 | 177 | 172 | 167 | 160 | system, pressure levels are currently under our target. The Bell |
| Taranaki | New Plymouth | New Plymouth MP | 250 | 150 | 5,355 | 62 | scmh | 5255 | 5398 | 5466 | 5534 | 5602 | 5670 | ########## |
| | | | | | | | kPa | 89 | 143 | 141 | 139 | 137 | 135 | |
| Taranaki | Patea | Patea | 350 | 210 | 202 | 79 | scmh | 247 | 244 | 241 | 238 | 235 | 232 | This pressure system is expected to see its performance |
| | | | | | | | kPa | 125 | 132 | 138 | 145 | 151 | 157 | increasing due to the decrease of demand forecasted over the |
| Taranaki | Waverley | Waverley | 350 | 210 | 173 | 54 | scmh | 210 | 210 | 210 | 210 | 210 | 210 | The performance of this pressure system relies mainly on one |
| | | | | | | | kPa | 88 | 88 | 88 | 88 | 88 | 88 | industrial customer. It is expected to see its performance stable |
| Manawatu | Palmerston North | Palmerston North LMP | 100 | 60 | 5,233 | 75 | scmh | 5293 | 5341 | 5389 | 5437 | 5485 | 5533 | ########## |
| | | | | | | | kPa | 57 | 57 | 67 | 67 | 67 | 67 | |
| Manawatu | Palmerston North | Palmerston North MP East | 400 | 150 | 2,564 | 375 | scmh | 2432 | 2479 | 2481 | 2266 | 2279 | 2291 | ########## |
| | | | | | | | kPa | 195 | 183 | 179 | 230 | 227 | 224 | |
| Manawatu | Palmerston North | Awapuni LMP | 100 | 60 | 61 | 18 | scmh | 64 | 64 | 64 | 64 | 64 | 64 | Growth is not expected in this network at this stage. A simple |
| | | | | | | | kPa | 54 | 79 | 79 | 79 | 79 | 79 | interconnection in RY15 will increase the performance of this |

** 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 were outlined in the 2013 Gas AMP, revised with our current knowledge.
If the growth was expected to spread over multiple years, it was uniformly spread over life.
The number of lots identified in the 2013 Gas AMP was multiplied by 0.6scm/h to calculate a diversified load per connection. This was summed and placed at a single point in the model where the load is expected to occur.
If the growth specified in the 2013 Gas AMP was inferior to our supply forecasts, we would reconcile these by adding the load at one extremity of the network.

| | |
|---|---|
| *Company Name* | **Powerco Limited** |
| *AMP Planning Period* | **1 October 2014 – 30 September 2024** |

# 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**

| | *Current year CY* **30 Sep 14** | *CY+1* **30 Sep 15** | *CY+2* **30 Sep 16** | *CY+3* **30 Sep 17** | *CY+4* **30 Sep 18** | *CY+5* **30 Sep 19** |
|---|---|---|---|---|---|---|
| *Consumer types defined by GDB* | | | | | | |
| Residential / Small Commercial | 1,502 | 1,517 | 1,551 | 1,577 | 1,583 | 1,583 |
| Commercial | 100 | 100 | 100 | 100 | 99 | 99 |
| Industrial | 1 | 1 | 1 | 1 | 1 | 1 |
| - | - | - | - | - | - | - |
| - | - | - | - | - | - | - |
| **Total** | 1,603 | 1,618 | 1,652 | 1,678 | 1,683 | 1,683 |

## 12c(ii): Gas Delivered

| | *Current year CY* **30 Sep 14** | *CY+1* **30 Sep 15** | *CY+2* **30 Sep 16** | *CY+3* **30 Sep 17** | *CY+4* **30 Sep 18** | *CY+5* **30 Sep 19** |
|---|---|---|---|---|---|---|
| Number of ICPs at year end | 103,913 | 104,602 | 105,319 | 106,037 | 106,755 | 107,477 |
| Maximum daily load (GJ/day) | 44,054 | 44,281 | 44,743 | 45,215 | 45,695 | 46,185 |
| Maximum monthly load (GJ/month) | 1,011,730 | 1,016,946 | 1,027,565 | 1,038,405 | 1,049,418 | 1,060,662 |
| Number of directly billed ICPs (at year end) | - | - | - | - | - | - |
| Total gas conveyed (GJ/annum) | 8,901,169 | 8,970,650 | 9,064,805 | 9,160,687 | 9,258,341 | 9,357,037 |
| Average daily delivery (GJ/day) | 24,387 | 24,577 | 24,767 | 25,098 | 25,365 | 25,636 |
| | | | | | | |
| Maximum monthly amount of gas entering network (GJ/month) | 1,011,730 | 1,016,946 | 1,027,565 | 1,038,405 | 1,049,418 | 1,060,662 |
| Load factor | 73.32% | 73.51% | 73.51% | 73.52% | 73.52% | 73.52% |

## Schedule 14a: Mandatory Explanatory Notes on Forecast Information

(In this Schedule, clause references are to the Gas Distribution Information Disclosure Determination 2012)

1. This Schedule requires GDBs to provide explanatory notes to reports prepared in accordance with clause 2.6.5.

2. This Schedule is mandatory—GDBs must provide the explanatory comment specified below, in accordance with clause 2.7.3. 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, 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 2014.<br>For example, the index used for the year ending 30 September 2015 is based on the annual average movement using CPI predictions (actuals where available) as follows:<br>(Q1 RY15 + Q2 RY15 + Q3 RY15 + Q4 RY15)/(Q1 RY14 + Q2 RY14 + Q3 RY14 + Q4 RY14). |

**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 2014.<br>For example, the index used for the year ending 30 September 2015 is based on the annual average movement using CPI predictions (actuals where available) as follows:<br>(Q1 RY15 + Q2 RY15 + Q3 RY15 + Q4 RY15)/(Q1 RY14 + Q2 RY14 + Q3 RY14 + Q4 RY14). |

# 5 COMPLIANCE CERTIFICATION

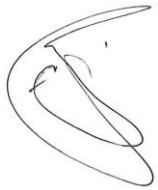
**DIRECTORS' CERTIFICATE CONFIRMING REGULATORY COMPLIANCE OF POWERCO'S GAS ASSET MANAGEMENT PLAN UPDATE IN THE FORM REQUIRED BY SCHEDULE 17 OF THE GAS DISTRIBUTION INFORMATION DISCLOSURE DETERMINATION 2012**

**Certification for Year-beginning Disclosures**

We, John Loughlin and Murray Bain 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 clause 2.6.3(2)(b) and clause 2.6.5(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 required industry standards.



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Director

Date: 25 September 2014

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Director

Date: 25 September 2014