

Explanatory notes to one-page performance summary of gas distributors

Date: 17 May 2021

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Purpose of this explanatory document

1. The purpose of these explanatory notes is to provide guidance on the interpretation of our one-page summaries of gas distributors' performance.

Purpose of the one-page summaries

2. The summaries are designed to promote a better understanding of each company's performance by providing high-level statistics on measures such as profitability, capital and operating expenditure, asset condition, line charge revenue, network reliability and service, on one page.
3. These one-page summaries are available as a PDF page for each gas distributor or an Excel workbook. These are located on our [website](#).

General information

4. The information compiled for the one-page summaries is derived from publicly available data.¹ Most of the data has either been audited and/or certified by the directors of the businesses. However, we cannot guarantee that there are no errors in the data provided. The 2020 one-page performance summaries cover the period ending 30 June 2020 for GasNet and Vector and 30 September 2020 for First Gas and Powerco. Unless otherwise stated, all values within the performance summaries refer to 2020.
5. The data we have highlighted presents a snapshot in time and is not intended to represent a thorough picture of performance. It does suggest some differences between the performance of different companies, such as the health of assets including pipes, district regulator stations and line valves. In cases of apparent poor performance, we will follow up with the companies to better understand their circumstances and we are likely to undertake further detailed analysis in the future.
6. All four individual gas distribution businesses have been aggregated to provide a snapshot of the industry. Generally sums or weighted averages are used. However, for reliability and service measures the simple average of the distributors has been used.
7. When assessing a gas distribution business against the industry average or other businesses it is important to note where there may be differences in the nature of their networks, for example, size or density of the network.
8. The one-page summary expresses financial terms in nominal dollars.
 - 8.1 Figures from schedule 11a(iv) (Report on forecast capital expenditure – Asset replacement and renewal) that are only presented in constant prices have been converted to nominal. This has been achieved by comparing the

¹ The Commission annually publishes an Excel database of information disclosure data provided by gas distributors. The latest database is located on our [website](#).

constant and nominal figures presented in schedule 11a(i) (Report on forecast capital expenditure – Expenditure on assets forecast) to attain a modifier.

Feedback

9. We welcome feedback on the one-pager or this document for future consideration. Please send feedback to regulation.branch@comcom.govt.nz with “One-page summary of GDBs – feedback” as the subject.

Disclaimer

10. While all reasonable care and diligence has been used in processing and extracting the data included in this document, we give no warranty that the data and information represented in the database is error-free. Users should apply reasonable care in the use of or reliance on any material contained in this document or the one-pagers.

Outline

11. The following page has an outline of the performance summaries with sections broken down into boxes. Please refer to the hyperlink for further detail on that section. We also note that with the part sale of Vector Gas to First Gas there are extra considerations documented at the end of these explanatory notes.

Drop down to change business

Industry

drop-down to change company

Explanatory documentation: [Link](#)

Summary database: [Link](#)

2020



Summary statistics

| | | 5 year trend | gear CAG |
|----------------------------|-----------|--------------|----------|
| Regulatory asset base | \$1,020m | | +4.4% |
| Regulatory profit | \$47.6m | | -12.2% |
| Return on investment | 5.32% | | -15.8% |
| Line charge revenue | \$130.7m | | -2.6% |
| Other income | \$1.6m | | +85.4% |
| Customer connections | 20,741 | | +1.8% |
| Total gas conveyed | 34,700 TJ | | +1.0% |
| Maximum daily load | 146.8 TJ | | +0.3% |
| Load factor | | | +1.0% |
| Capital expenditure | \$56.1m | | -1.1% |
| Operating expenditure | \$41.7m | | +4.7% |
| Capital contributions | \$7.4m | | +8.2% |
| Related party transactions | \$27.0m | | +1.3% |
| System length | 18,419km | | +1.2% |

Summary statistics

Capital expenditure



Capital expenditure

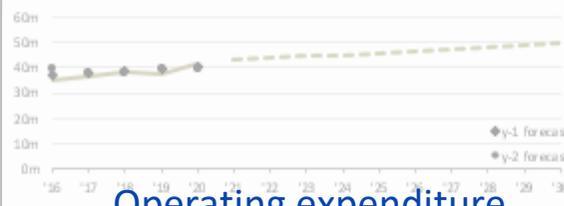
3 year ratios

| Total capex / asset base | Total capex / system length | Total capex / connections | Total capex / depreciation |
|--------------------------|-----------------------------|---------------------------|----------------------------|
| 6.1% | \$3.33 per m | \$205 | 1.78 |

Capex by expenditure category

| Category | Average (2018-2020) | 5 year trend | % of capex |
|-----------------------------------|---------------------|--------------|------------|
| Consumer connection | \$33.13m | | 54.6% |
| Asset replacement & renewal | \$7.24m | | 11.9% |
| Non-network assets | \$5.93m | | 9.8% |
| System growth | \$5.44m | | 9.0% |
| Reliability, safety & environment | \$4.74m | | 7.8% |
| Asset relocations | \$4.23m | | 7.0% |
| Total capital expenditure | \$60.72m | | 100.0% |
| Related party transactions | \$15.00m | | 24.1% |

Operating expenditure



Operating expenditure

3 year ratios

| Total opex / asset base | Network opex / system length | Non-network opex / connections | Network opex / GJ |
|-------------------------|------------------------------|--------------------------------|-------------------|
| 4.0% | \$0.83 per m | \$81 | 43.5¢ per GJ |

Opex by expenditure category

| Category | Average (2018-2020) | 5 year trend | % of opex |
|-------------------------------------|---------------------|--------------|-----------|
| Business support | \$15.21m | | 38.8% |
| System operations & network support | \$8.88m | | 22.7% |
| Routine & corrective maintenance | \$6.86m | | 17.5% |
| Service interruptions & emergencies | \$5.56m | | 14.2% |
| Asset replacement & renewal | \$2.63m | | 6.9% |
| Total operating expenditure | \$39.21m | | 100.0% |
| Related party transactions | \$5.68m | | 14.5% |

Company details

PG Regulated? -
 Year end: -
 : -
 Ownership: -
 Head Office: New Zealand
 Phone number: -
 Website: -

Company details



Pipeline assets

| Estimated state of the assets | IP Main pipes | Pressure Main pipes | Low Pressure Main pipes | Service pipes |
|-------------------------------|----------------|---------------------|-------------------------|----------------|
| Quantity | 723km | 11,398km | 277km | 21km |
| PE/steel/other | 0.4%/0.0%/0.0% | 95.4%/0.0%/0.0% | 80.8%/0.0%/0.0% | 2.2%/0.0%/0.0% |
| RAB Value | \$118.2m | \$2.0m | \$2.0m | \$2.0m |
| Average grade | 3.04 | 3.61 | 0.00 | 3.07 |
| Grade 1 / 2 | 0.0% / 0.0% | 0.1% / 1.1% | 0.0% / 10.0% | 0.0% / 0.0% |
| Unknown grade | 7.2% | 1.7% | 0.5% | 38.7% |
| Average age | 37 years | 24 years | 36 years | 32 years |
| Over generic age | 0km (0.0%) | 0km (0.0%) | 0km (0.0%) | 0km (0.0%) |
| Unknown age | 0.0% | 0.0% | 0.0% | 0.0% |
| 5yr replacement req (ex) | 0.0% | 0.7% | 5.0% | 0.0% |
| 5yr planned replacem | 0.0% | 8.5% | 177.0% | 0.0% |
| Forecast repex (ave) | \$38k (-90%) | \$7,237k (+51%) | \$407k (+303%) | \$8k (-98%) |
| Repex series | | | | |

Asset condition

Pipelines

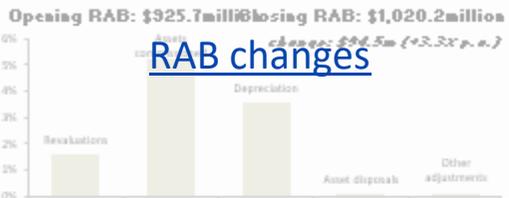
Non-pipeline assets

| Estimated state of the assets | Regulator Stations | Line Valves | Special Crossings | network assets |
|-------------------------------|--------------------|----------------|-------------------|----------------|
| Quantity | 587 | 7,315 | 589 | 369 |
| RAB Value | \$2.0m | \$2.0m | \$5.5m | \$48.0m |
| Average grade | 3.15 | 3.14 | 3.16 | 3.11 |
| Grade 1 / 2 | 0.7% / 3.0% | 0.0% / 0.1% | 0.0% / 0.1% | 0.0% / 22.7% |
| Unknown grade | 314.5% | 21.5% | 0.0% | 1.7% |
| Average age | 1 years | 25 years | 36 years | 17 years |
| Over generic age | 0km (0.0%) | 0km (0.0%) | 0km (0.0%) | 86 (23.3%) |
| Unknown age | 0.0% | 0.0% | 0.0% | 0.0% |
| 5yr replacement req (ex) | 0.2% | 0.0% | 0.0% | 11.3% |
| 5yr planned replacem | 0.0% | 4.8% | 173.1% | 434.9% |
| Forecast repex (ave) | \$1,617k (+264%) | \$190k (+123%) | \$347k (+5%) | \$920k (+17%) |
| Repex series | | | | |

Asset condition

All other network assets

Annualised RAB changes (2018-2020)



RAB changes

Line charge revenues

Proportion of revenue Charges per unit

Average unit charge: \$7.9 /ICP
 Delivery (¢/kWh): \$0.02
 2020: \$1.03 /GJ

2017:

2020:

Line charge revenues

Service

5 year trend

Number of emergencies:

Average call response time (hrs): 0.57

Proportion of emergencies within 1 hour: 88.3%

Proportion of emergencies responded to within 3 hours: 100.0%

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System Reliability

5 year trend

Planned interruptions on the network: 1,057

Unplanned interruptions on the network: 397

Interruption rate: 7.9/100km

Total SAIDI (minutes per customer): 14.86

Total SAIFI (interruptions per customer): 14.86

Total CAIDI (minutes per interruption): 1588.3

Service

1. This section summarises the service statistics for the

Summary statistics

12. For various high-level parameters there are three columns representing:
 - 12.1 the actual value for 2020;
 - 12.2 a small graph showing the 5 year trend (the mini-graphs can be hovered over in Excel to see the actual values for the time series); and
 - 12.3 the three year compound annual growth rate (CAGR).

Line charge revenues

13. Line charges have been disaggregated into fixed and variable charges based on the data provided in Schedule 8 (Report on billed quantities and line charge revenues) of the information disclosures disclosed by each gas distributor. From this there are two columns:
 - 13.1 the proportion of total revenue sourced from each charging category for the latest year; and
 - 13.2 the average charge per unit based on the applicable quantity:
 - 13.2.1 for fixed charges, the average daily charge per customer; and
 - 13.2.2 for variable charges, the average charge per gigajoule of gas delivered to customers.
14. The bar graph illustrates the proportion of revenue from each charging category for the latest year and three years prior. This is intended to indicate any changes in the charging categories, such as a tariff restructure.
15. Gas distributors can have very different tariff structures, both between distributors and between customer groups. Caution is required when interpreting this section and both types of charges should be looked at in combination rather than in isolation.

Company details

16. This section provides general information about the gas distributor as at the publication date.

RAB changes

17. This section summarises the change in the value of each business' assets (known as the regulatory asset base) over the last three years, and the breakdown of that change.²

² We note that our methodology for calculating the annualised RAB changes for the industry and for 'Vector + First Gas' will be slightly overstated due to First Gas' 15 month 2017 information disclosure, however, we do not consider this material.

Capital expenditure

18. The main graph shows historic actual capital expenditure with a solid line and forecast capital expenditure with a dashed line. There are also references to the forecast from the previous two years (where known) so that one can compare previous forecasts with actual capital expenditure.
19. Four ratios are provided. To account for lumpy expenditure the ratios are over the most recent three years. These ratios are:
 - 19.1 total capex over asset base – the percentage of capital expenditure relative to the regulatory asset base;
 - 19.2 total capex over system length – the amount of capital expenditure spent per kilometre of pipeline;
 - 19.3 average capex per connection – the amount of capital expenditure spent per consumer; and
 - 19.4 total capex over depreciation – the ratio of capital expenditure to the depreciation during the period. This is intended to assess whether the distributor is replacing the value lost through depreciation (although the capex will include some expenditure to manage growth in addition to replacement of old degraded assets).
20. Capital expenditure is broken down into the categories contained in information disclosure, and the amount of capital expenditure that is spent through related parties is also shown. The three columns are:
 - 20.1 'Average (2018-2020)' – the average capital expenditure over the last three years;
 - 20.2 '5 year trend' – a small graph showing the 5 year trend (the mini-graphs can be hovered over in Excel to see the actual values for the time series); and
 - 20.3 '% of capex' – the percentage that category makes up of the total capital expenditure.

Operating expenditure

21. The main graph shows historic actual operating expenditure with a solid line and forecast operating expenditure with a dashed line. There are also references to the forecast from the previous two years (where known) so that one can compare previous forecasts with actual operating expenditure.

22. Four ratios are provided. Consistent with capital expenditure, these ratios are over the most recent three years. These ratios are:
- 22.1 total opex over asset base – the percentage of operational expenditure relative to the regulatory asset base;
 - 22.2 network opex over system length – the amount of operating expenditure spent on the network per kilometre pipeline;
 - 22.3 non-network opex per connection – the amount of operating expenditure spent on non-network activities per consumer; and
 - 22.4 total opex over GJ – the amount of operating expenditure spent per gigajoule of gas conveyed.
23. Operating expenditure is broken down into the categories contained in information disclosure, and the amount that is spent through related parties is also shown. The three columns are:
- 23.1 ‘Average (2018-2020)’ – the average operating expenditure over the last three years;
 - 23.2 ‘5 year trend’ – a small graph showing the 5 year trend (the mini-graphs can be hovered over in Excel to see the actual values for the time series); and
 - 23.3 ‘% of opex’ – the percentage that category makes up of the total operating expenditure.

Service

24. This section summarises the service statistics for the network. The arrows show the general direction of that service measure over the last five years.

Reliability

25. The aim of this section is to summarise the reliability statistics for the network and therefore includes Class B (planned) and Class C (unplanned) interruptions; however SAIDI, SAIFI and CAIDI numbers are based on the total number of interruptions. The arrows show the general direction of that reliability measure over the last five years.
26. CAIDI shows the average amount of time it takes to restore a fault to a consumer. It is calculated as SAIDI divided by SAIFI.
27. The reliability measures used in the performance summaries have not been adjusted for extreme events which can have a significant impact on the gas distributor.

Asset condition

28. There are two sections on asset condition covering eight asset categories including pipelines, district regulator stations, line valves and special crossings.
29. Other network assets consists of monitoring and control systems and cathodic protection systems.
30. For each of these asset categories a dial is used to indicate the condition of these assets. On the dial green is indicatively good, yellow is appears OK, and red is a potential risk. We encourage the user to refer to the distributors' latest asset management plan for further information on the state of its assets.
31. A formulaic approach has been used to determine where each of the asset dials are located and judgement has been applied on how much weighting to give grade 1, grade 2, unknown grade, and old assets³. For indicative purposes:
 - 31.1 over 15% of assets being classed as grade 1 will put that asset into the red zone;
 - 31.2 over 60% of assets being grade 2, unknown grade, or over its generic age (with accordance to paragraph 32.1) will put that asset into the red zone; or
 - 31.3 some combination of the above.
32. Also for each of the asset categories there is some summary data relating to quantity, age, grading, and replacement intentions. For further clarification:
 - 32.1 Over generic age – the number of assets that exceed the standard physical asset lives in accordance with Schedule A of the gas distribution services input methodologies, or in the case of cathodic protection systems, 35 years.⁴
 - 32.2 5 year replacement required – our estimation of the proportion of assets requiring replacement over the next five years and is based on the number of grade 1 (100%) and grade 2 (50%) as disclosed by the distributor.
 - 32.3 5 year planned replacement – the percentage that the distributor intends to replace over the next five years. Concerns may be raised if this differs significantly from our estimation above.
 - 32.4 Forecast repex – the forecast average annual expenditure on asset replacement and renewal associated with this asset for the next five years,

³ For the 2017 dashboard, the district regulator station asset dial is impacted by the high proportion of assets over the generic age. The dial should be considered along with the other detailed information provided by the businesses which indicates the condition of those assets including the average grade of assets and those assets assessed as being Grade 1/2.

⁴ *Commerce Act (Gas Distribution Services Input Methodologies) Determination 2012* [2012] NZCC 27, as amended.

which is disclosed in their asset management plan. And how this compares to their historical spend.

32.5 Repex series – a time series of actual and forecast asset replacement and renewal expenditure associated with the asset.

33. Our treatment of asset grades is guided by definitions provided in the information disclosure determination and replicated in Table 1 below. There is scope for gas distribution businesses to apply judgement when assigning a grade to their assets. Consequently, some distributors' assets may appear worse than they are in reality.⁵

Table 1: Definitions of asset grades

| | |
|---------------|---|
| Grade 1 | means end of serviceable life, immediate intervention required |
| Grade 2 | means material deterioration but asset condition still within serviceable life parameters. Intervention likely to be required within 3 years. |
| Grade 3 | means normal deterioration requiring regular monitoring |
| Grade 4 | means good or as new condition |
| Grade unknown | means condition unknown or not yet assessed |

⁵ We caution that asset condition is a somewhat subjective measure and gas distributors may have different interpretations on what each grade means.