COMMERCE COMMISSION NEW ZEALAND
Te Komihana Tauhokohoko

Approach to trend analysis of local lines companies

Purpose of this paper

This paper discusses each of the key features of our approach to the analysis in the 'Trends in local lines company performance' report, which are:

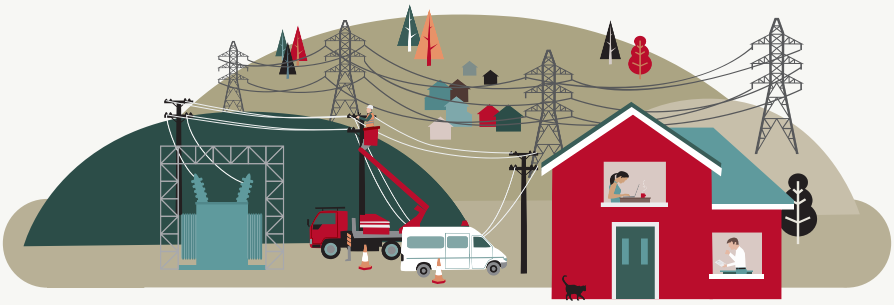
- our primary method of analysis is trend analysis;
- our analysis is based on data published under our information disclosure (ID) requirements;
- we have adjusted the data to enable consistent analysis where clearly required;
- we have defined profit in a way that allows it to be presented clearly;
- our analysis is predominantly given in nominal price terms; and
- our analysis relates to customers on average rather than an 'average' customer.

This paper also discusses the legislative basis of the report and the regulatory context through the period of our analysis. We completed the report as part of our responsibilities to summarise and analyse the information that we require local lines companies to disclose under the powers of the Commerce Act 1986.[1] We note that 17 of the local lines companies were also subject to price-quality regulation during the period, under which we placed maximum limits on their revenue and required them to meet minimum standards of quality.

How we regulate local lines companies under Part 4

Under Part 4 of the Commerce Act 1986 we have a role in regulating markets where there is little or no competition, and little or no likelihood of a substantial increase in competition.

The purpose of Part 4 is to promote the long-term benefit of consumers in these regulated markets where there is little or no competition, and little or no likelihood of a substantial increase in competition.[2] To do this, we focus on promoting outcomes that are consistent with the outcomes seen in competitive markets, such that regulated businesses have incentives to innovate, invest, improve efficiency, and to provide services at a quality that reflects consumer demands.[3] We also aim to ensure the benefits of efficiency gains are shared with consumers (including through lower prices) and to limit the ability of regulated businesses to earn excessive profit.[4]



1. Section 53B(2) of the Commerce Act 1986.
2. Section 52A(1) of the Commerce Act 1986.
3. Section 52A(1)(a)-(b) of the Commerce Act 1986.
4. Section 52A(1)(c)-(d) of the Commerce Act 1986.

All local lines companies that provide electricity distribution services are regulated under Part 4 because they are natural monopolies (ie, there is little or no competition in the markets for the services they offer). The two types of regulation that we use in relation to electricity distribution services are:

- Price-quality regulation: we set price and quality controls for local lines companies, which are called 'price-quality paths'. These paths limit the amount of revenue the businesses can earn and require them to deliver services at a certain level of quality. 'Consumer-owned' lines companies (12 of the 29) that meet certain criteria are exempt from these controls because these companies' consumers, as owners of the business, are able to ensure that the business acts in their interests.[5, 6, 7]
- ID regulation: We set requirements for local lines companies to publicly disclose information relevant to their performance. The purpose of ID regulation is to ensure that sufficient information is readily available to interested persons to assess whether the purpose of Part 4 is being met.[8] ID provides transparency to interested persons of the performance of local lines companies, and provides an ongoing source of information so that trends can be identified and monitored over time. The types of information that local lines companies are required to publicly disclose under ID requirements include: data on prices; measures of quality; financial information; and forecasts of future investment and expenditure.

We summarise and analyse the information local lines companies disclose under ID. When they disclose information under our ID requirements, Part 4 requires us to publish a summary and analysis of that information for the purpose of promoting greater understanding of the performance of individual businesses, how they are performing compared to each other and any changes over time.[9] We may also, as part of that summary and analysis, include an analysis of how effective the ID requirements imposed on the services are in promoting the purpose of Part 4.[10]

The analysis in the 'Trends in local lines company performance' report builds on existing summary and analysis of ID data that we have undertaken under Part 4. The analysis draws on the data on revenue, costs and quality that is disclosed under ID. We note that this does not cover all the data under ID. We have also supplemented ID data in this analysis with data we collected in advance of price-quality path resets under section 53ZD of the Commerce Act 1986. We did this to fill gaps in ID data for some companies, especially early in the period.

5. Section 54G(2) of the Commerce Act 1986 provides that 'consumer-owned' local lines companies are exempt from default/customised price-quality regulation under Part 4. For a local lines company to be considered 'consumer-owned', it must meet all the criteria provided in section 54D, which includes that the local lines company has fewer than 150,000 connections (ie, installation control points, or ICPs).
6. Explanatory note to the Commerce Amendment Bill (201-1), Government Bill, as introduced to the House of Representatives, Wellington, 13 February 2008, p. 8.
7. There are some circumstances where a consumer-owned local lines company can become subject to price-quality regulation. Section 54H(2) of the Commerce Act 1986 provides that the Commission can make a recommendation to the Minister that the purpose of Part 4 would be better met if price-quality regulation were imposed on a consumer-owned local lines company. The Commission can only make this recommendation following consideration of a petition made by consumers. The consumer petition must satisfy the requirements in section 54H(3).
8. Section 53A of the Commerce Act 1986.
9. Section 53B(2)(b) of the Commerce Act 1986.
10. Section 53B(3) of the Commerce Act 1986.

We expect that the analysis in the report 'Trends in local lines company performance' and associated materials will be of interest to all stakeholders. Electricity sector stakeholders need to have confidence that the prices electricity customers pay local lines companies reflect an industry that is working efficiently, and for their long-term benefit. This analysis will be an important input into assessments of the performance of local lines companies and the effectiveness of our regulation.

Our primary method of analysis is trend analysis

Given fluctuations in revenue and expenditure from year-to-year, we have assessed changes over time based on trends.

Assessing a dollar or percent increase by using the beginning and endpoints of a data series can misrepresent the direction of travel if either point represents a relative peak or trough.

Using trends is similarly imperfect, as it can over or under-represent the change that has occurred. Overall, we consider it provides a more informative representation of the issues. We also think it is more useful since the purpose of the analysis is to understand trends, rather than to provide precise reporting of changes.

We have used a combination of the slope of the linear trend, giving an annual change in dollars per customer connection, and the exponential trend, which approximates a compound annual rate of growth. The specific trend used for any single piece of analysis has depended on what we considered best described the underlying drivers and issues.

Our analysis is based on data published under our information disclosure requirements

Our analysis draws on ID data covering the period 2008 to 2021. These are years to 31 March – as are all years referenced in this report unless otherwise stated. The period of our analysis largely precedes the Covid-19 pandemic but data from the year to 31 March 2021 may be affected. We are considering what the impact of Covid-19 may be on ID data—for this analysis we have not adjusted for this factor.

We have generally based our analysis on the data as it is disclosed by the local lines companies, which may contain some errors. The data is also defined within the regulatory context. For example, tax amounts may not be the same as the actual tax paid in that year by the lines company because of certain tax effects that are outside our regulatory scope.

We have sought to understand the factors driving changes in revenue and reliability across as long a period as we reliably can.

Prior to 2008, the ID requirements were materially different, so it is difficult to readily compare that data with more recent data. Our analysis therefore starts from the year ending 31 March 2008. The analysis extends to the year ending 31 March 2021, the last year for which ID data was available at the time of preparation. We intend to update this report and make updated analysis available in the Performance Accessibility Tool as new data becomes available.

We have generally been able to create a consistent time series from 2008 onwards for high-level expenditure categories. However, we have still had to navigate various changes that were made to the ID requirements over our data period. Changes in the way costs have been categorised over time mean the data cannot always be readily compared across the full time series, particularly at a more detailed level. This has limited the time-period we look at in some cases.

We have also generally limited our analysis at an individual local lines company level to the period from 2010 to 2021. This is because Vector's sale of assets to Wellington Electricity in July 2008 (ie, within the year ending 31 March 2009) affects the results for those companies.

Our analysis uses the average number of customer connections as a proxy for the number of customers. Our series of connection numbers relies on estimates, as there is not a consistent series of this information over the data period. For the period 2008-2012 we have averaged the total year-end connection figures of two years to produce an estimate of the average number served during the year (this also utilised data for year-end connections in 2007). This is then joined with the average connection figures that have been disclosed since 2012. These were disclosed for 2012 as part of the transition to the new ID requirements, allowing us to use 2012 as a basis to merge the two parts into a single series.

We adjusted the data to enable consistent analysis where clearly required

For the analysis in this report, we have generally relied on data 'as disclosed' by local lines companies. We have used this approach because we recognise that the onus is on local lines companies to be sufficiently confident in their data before it is publicly disclosed. The information is subject to independent audit requirements and is certified by local lines company directors. Further, our compliance checks have given rise to some corrections, and may continue to do so in the disclosed data.

Nevertheless, some anomalies and discrepancies in the information that has been publicly disclosed would have materially impacted our analysis if we did not account for them.

Specifically, we have accounted for data that is not available for Orion NZ for 2011. We gave Orion NZ an exemption from disclosing its historic data for 2011 to allow it to focus on its response to the 22 February 2011 earthquake in Christchurch. This means that there is limited data for Orion NZ for that year—particularly for detailed expenditure categories. To prevent this from creating a distorting gap in the data affecting industry-level analysis, or having to exclude Orion NZ from most of the analysis entirely, we have created fill-in data where 2011 is missing, set at the average of the figures it disclosed for 2010 and 2012. This data is not intended to be an accurate estimate of this unavailable data. Rather, it is intended to achieve minimal disturbance to the data series.

We also accounted for some anomalies in the disclosed customer connection figures, given the extent to which we use this data. We replaced temporary fluctuations in connection numbers disclosed by Electra and MainPower NZ with a straight-line estimate based on figures disclosed for the years on either side of the fluctuation.

There are likely to be some other errors in the disclosed data, which may be identified after this report has been published. We invite local lines companies to contact us if they identify an error with the data used in this report that they consider should be addressed.[11]

11. We can be contacted by email: infrastructure.regulation@comcom.govt.nz.

We have defined profit in a way that allows it to be presented clearly

We present profit in this report as what is defined in information disclosure as regulatory profit, although we frequently break it down into cash profit and non-cash revaluations for clarity. Regulatory profit is defined as income minus expenses and tax, plus non-cash revaluations. For this:

- Income is the sum of line charge revenue, gains/losses on asset disposals, and other regulated income;
- Expenses is the sum of operating expenses, pass-through and recoverable costs, and depreciation; and
- Non-cash revaluations is the annual increase in asset values recorded by the local lines company in line with reported inflation.

Our analysis is predominantly given in nominal price terms

All the financial analysis we present has been given in nominal terms, or 'dollars-of-the day'. Some proportion of the trends we see will therefore reflect general price inflation that customers will have experienced across all their spending. We have chosen to present our analysis in this way because we think that it will be most familiar to customers' experience and so it is the most meaningful approach.

Further, the factors influencing general price inflation as experienced by customers are not the same factors influencing the cost of distribution services. This is an issue that we discussed in-depth when we reset the default price-quality paths for local lines companies for the year starting 1 April 2020.[12] Where we do address inflation in this report, we have used Stats NZ's consumer price index.

Our analysis relates to customers on average, rather than an 'average' customer

We present some of our analysis in dollars per customer. We calculate this simply as the total dollars under consideration, divided by the total number of customer connections. This is both a way for us to normalise the data given the varying size of local lines companies, and a way to relate the results to the experience of customers on average.

However, this captures customers of all sizes and load profiles, some of whom will contribute a much greater share of local lines company revenue than others. We therefore emphasise that the figures we present do not reflect the experience of an 'average' or 'typical' customer—often represented as a residential household consuming 8,000 kWh of electricity a year.[13] The experience of an average customer of a local lines company will depend on how each local lines company sets its prices for all the different groups of customers of that local lines company, which we have not considered as part of this analysis.

12. This was discussed in the Issues Paper and reports that discussed our Draft Decision and Final Decision. These can be found at: https://comcom.govt.nz/regulated-industries/electricity-lines/electricity-lines-price-quality-paths/electricity-lines-default-price-quality-path/2020-2025-default-price-quality-path
13. For example, the Ministry of Business Innovation and Employment bases its price-monitoring analysis on such a customer (see https://www.mbie.govt.nz/assets/qsdep-report-15feb2022.pdf).

The results of our analysis reflect the regulatory context under which local lines companies have operated

Although the analysis in this report identifies trends in local lines companies' revenue and reliability and begins to explore the drivers of these trends, it does not generally conclude whether these changes over time constitute poor performance or strong performance. The context and situation of each local lines company is important for understanding how 'good' their performance is, which requires detailed company-specific analysis.

Price-quality regulation has applied across the full period from 2008 to 2021:

- Until 2010, all local lines companies were subject to price path thresholds set under Part 4A of the Commerce Act 1986 (subsequently repealed).
- The first price-quality paths that we set for price-quality regulated local lines companies under Part 4 applied from 1 April 2010, though we decided to reset them in 2013 to apply input methodologies for the first time.[14] The input methodologies set out the rules, requirements and processes that must be applied to regulation of electricity lines services.[15]
- We reset the default price-quality paths again in 2015. That reset applied until 31 March 2020. The current default price-quality paths have applied since 1 April 2020.[16]

For the local lines companies subject to price-quality regulation, the trends we observe will reflect the price-quality paths that we have set. In particular, when we first applied our input methodologies in 2013, we made some material changes in the revenue we allowed local lines companies to earn compared to their previous allowances, as we sought to realign their reasonable costs and revenues.

In some cases, we determined that a local lines company's revenue needed to be allowed to increase so that they could invest to accommodate growth and maintain reliability. When we reset price-quality paths for 2020-2025 we allowed for increased investment in networks, with local lines companies forecasting more than $2 billion in total would be spent on asset replacement and renewal and network growth over those five years. This would ensure it could meet the long-term needs of its customers. In other cases, we determined that a local lines company's revenue should reduce to prevent excessive profit. The price-quality paths also provide incentives for local lines companies to do things like reduce their costs, so short-term increases in profit can represent a local lines company receiving an incentive payment for past improved performance.[17] In circumstances where a local lines company has not complied with the requirements of its price-quality path, we have a range of enforcement responses available to us, and we have used these in response to non-compliance.[18]

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14. The reset default price-quality paths applied from 1 April 2013. In resetting the price-quality paths in the middle of a five-year period, we applied claw-back so that local lines companies subject to the path would be able to earn a normal return from 1 April 2012 (ie, as if the price reset had been implemented in full on 1 April 2012).

15. Input methodologies are the rules, methodologies, requirements and processes that underpin regulation under Part 4 of the Commerce Act. We must apply the Input Methodologies when we set price-quality paths and set information disclosure requirements. Regulated businesses are also required to apply the input methodologies. They are important as they increase certainty about how key inputs to price-quality paths and Information Disclosure requirements will be determined. The Input Methodologies cover matters like how assets are to be valued, depreciated and revalued, how we estimate the cost of capital, how tax should be treated, and how common costs should be allocated where businesses provide both regulated and unregulated services.

16. The current default price-quality path is the Electricity Distribution Services Default Price-Quality Path Determination 2020 [2019] NZCC 21 (consolidated as at 20 May 2020). It applies for the period 1 April 2020 – 31 March 2025.

17. These incentive mechanisms are designed to share the benefits of improvements between the local lines companies and their customers so that there is incentive for the local lines companies to improve, while also ensuring that customers benefit from the improvements.

18. Our case register contains the enforcement outcomes we have taken (such as judgments, enforceable undertakings and warning letters), and is available on our website here.

We set price-quality paths for regulated local lines companies using a methodology that is required to be relatively low-cost. Default price-quality paths use a broadly standardised approach. If a default price-quality path does not suit the particular circumstances of a business, it can apply for and propose its own 'customised' price-quality path. Customised price-quality paths use more business specific information, and rely on more in-depth audit, verification, and evaluation processes. Three local lines companies have operated under customised price-quality paths during the period of our analysis:[19]

- Orion NZ, for the period 2014 to 2019;
- Wellington Electricity, beginning in 2018, and ending with our analysis period in 2021; and
- Powerco, beginning in 2018, and continuing beyond our analysis period to 2023.

19. Aurora recently moved to a customised price-quality path for the period 2021-2025. This falls outside the period of our analysis, but Aurora had related changes in their performance trends over 2018-2021 that are visible in the analysis, including increased investment and lower profits. This was because Aurora identified a need for heavy investment on the network before they moved to a customised price-quality path and were already ramping up investment during the period of our analysis.

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