



Design and Implementation of the Targeted Control Regime for Electricity Lines Businesses

Overview of a Recommended Approach

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1 Introduction

The Commission is in the process of consulting on the design of thresholds for a targeted control regime for electricity lines businesses. It is also conducting a review of asset valuation methodologies, which may help inform that consultation process and the setting of possible information disclosure requirements. For these purposes, it has issued issues papers, discussion papers and held conferences.

VECTOR and UnitedNetworks have participated throughout the process in the form of submissions, presentations at conferences and replies. At our joint presentation at the conference on asset valuation methodologies the Commission raised points, which indicated its interest in how the various components of the targeted control regime could be designed and implemented as an integrated package. This paper sets out an approach to best achieve this.

2 Context of the design and implementation task

The environment within which the Commission is required to implement the targeted control regime includes:

- Consumer demand for increasing levels of service provided by lines businesses, and particularly those consumers with sensitive manufacturing and information processing equipment.¹
- Planned capital expenditure of \$2.2 billion by lines businesses over the next ten years to maintain and improve service.²
- Ongoing operational consolidation in the sector through acquisition and the increasing use of outsourcing. In many cases this involves one lines business undertaking work for another. Opportunities exist to extend this trade internationally by way of exporting services to lines businesses elsewhere.
- Lines businesses report on service performance measures annually as part of their existing information disclosure requirements, using a consistent basis to that used in many other electricity markets. They also report on financial performance measures, and provide ten year asset management plans that set out how they intend to maintain service over that period.
- There are 28 distribution lines businesses and 1 transmission company to which the targeted control regime applies. These businesses do not have statutory franchise areas, but are required to maintain service as provided in 1992 until 2013. Each lines business has its own price schedules and their pricing structures vary significantly.
- New Zealand prices for the electricity distribution service are amongst the lowest in the OECD.³

¹ See examples in Appendix 2 of our submission, "Joint submission to the Commerce Commission in respect of the Commission's discussion paper on asset methodology for electricity lines businesses' system fixed assets", 11 November 2002

² *ibid*, Appendix 2

³ For a sample of international distribution prices see Annex IV of "UnitedNetworks submission to the Commerce Commission in response to its discussion paper on the regulation of electricity lines businesses, May 2002

The legislative mandate for the targeted control regime is relatively non-prescriptive as to the detail of the regime. However, it stipulates a purpose statement that requires the regime to be focused on the promotion of the efficient operation of the relevant markets. It also requires the regime to be targeted, as opposed to universal, in application.

Legislation requires the Commission to undertake a one-off audit of the current valuations that lines businesses report under the existing information disclosure requirements. This audit was completed successfully earlier this year. In addition the Commission must:

1. Require lines businesses to disclose information on their businesses so that a wide range of people are informed about such factors as profits, costs, asset values, price, quality, security, and reliability of supply.
2. Set thresholds for lines businesses, and assess these businesses against them.
3. If a lines business breaches the thresholds, determine whether the goods and services supplied by it are to be placed under control.
4. If it determines that the goods and services supplied by a lines business should be placed under control, authorise the prices and service levels, or accept an undertaking, for the controlled goods and services.

We discuss each of these four components below.

3 Information disclosure

Legislation obliges the Commission to require lines businesses "to disclose information concerning their business as a line owner or as an electricity distributor" (s. 57T). The purpose of this disclosure is "to promote the efficient operation of markets directly related to electricity distribution and transmission services ... so that a wide range of people are informed about such factors as profits, costs, asset values, price (including terms and conditions of supply), quality, security, and reliability of supply of those businesses" (s. 57T).

Once this information is disclosed, the Commission must publish a summary and analysis of this information "for the purpose of promoting greater understanding of the relative performance of individual line owners and electricity distributors, and the changes in performance over time" (s. 57V).

We interpret these requirements as supporting the continuation of the current approach to information disclosure requirements, which includes the disclosure of financial and service performance measures, and asset management plans. The current disclosures provide a useful database for assessing relative financial and service performance of lines businesses, and their intentions with respect to maintaining service over time. In addition, we envisage some form of disclosure may need to be established to demonstrate lines businesses have taken reasonable steps to identify consumer preferences and these preferences are reflected in the asset management plan.

4 Thresholds

The Commission is required to "set thresholds for the declaration of control" (s. 57G). The thresholds are the means by which the Commission is to target its control

activities. We view the thresholds as a performance monitoring tool, whereby the Commission targets any of its further interventions to those lines businesses that fail to perform to the levels set in the thresholds.

The purpose of this targeted control approach is “to promote the efficient operation of markets directly related to distribution and transmission services through targeted control for the long-term benefit of consumers ...”(s.57E).

Thresholds therefore need to be designed to monitor the performance of lines businesses in a manner relevant to the long-term interests of consumers, to promote the efficient operation of markets, and to target control activities. Their design will signal to the industry what is and is not acceptable performance, and it is critical that these signals are aligned with consumer preferences.

We consider these objectives for thresholds can be best met by designing the thresholds as a benchmarking tool for the prices and service levels of lines function services. These benchmarks would be referenced to the price and service levels provided by comparable lines businesses in other similar markets internationally.

A UnitedNetworks’ submission⁴ sets out in detail how thresholds of this nature could be designed and implemented. This submission was reviewed for its implementability (including addressing exchange rate issues) by an electricity benchmarking expert in the US (Pacific Economics Group),⁵ and an experienced New Zealand public policy expert (Mr Paul Carpinter).⁶ Both reviews supported the proposal. The key features of these proposed thresholds⁷ are:

- They would be defined in terms of price and service quality.
- Lines businesses would be segmented according to their energy density and consumer density for the purposes of applying the thresholds.⁸
- Price and service quality levels for each segment would be benchmarked from those of lines businesses with similar densities operating in comparable international markets. For the first five year period prices would be the lower of the benchmarked prices and the lines business’ current prices (with the matching service levels).
- The thresholds would apply to the mass market only (to consumers with consumption up to 500MWh per annum).
- Consumers could “contract out” of the threshold regime if they required a service on terms different to that specified in the thresholds (e.g. if they required a higher level of service).

Some of the benefits of this approach to thresholds would be:

⁴ “Response to issues raised by the Commerce Commission on UnitedNetworks’ proposed regulatory thresholds for electricity lines businesses”, 16 September 2002

⁵ “Regulatory Thresholds for Electricity Lines Businesses in New Zealand: The Merits and Feasibility of UnitedNetworks’ Proposal”, Dr. Lawrence Kaufmann, Pacific Economics Group, September 2002

⁶ “Review of UnitedNetworks’ Proposal for the Regulation of Electricity Lines Businesses”, Paul Carpinter, 23 September 2002

⁷ The appendix to this paper illustrates the key aspects of the proposed thresholds

⁸ For analysis of consumer and energy densities and their implications for cost, see Appendix 6 of the 16 September submission above from UnitedNetworks. The cost analysis in this appendix was peer reviewed by Dr. John Small of Covex Ltd

- The thresholds would focus on issues of long-term interest to consumers, namely the quality of service they receive and the price they pay for it.
- Through the updating of the thresholds, NZ consumers would be kept up to date with service and price level improvements achieved in comparable markets.
- The price levels in the thresholds and the cost efficiency of the firm would determine the profitability of lines businesses. The thresholds would thereby limit (even prevent) the ability of lines businesses to extract excessive profits through excessive prices or inferior service.
- The benchmarking approach would take account of consumer density and energy density, which are the two primary costs drivers determined by consumers, not the business. This would ensure incentives to invest are retained across networks with varying densities.
- The thresholds would minimise intrusion by the Commission into the operation of lines businesses, be a cost effective way to implement this aspect of the targeted control regime, and promote the efficient use of markets to drive productivity improvements in the sector.
- Lines businesses would face strong incentives to minimise costs, including through accessing scale, but not at the expense of degrading service.
- The thresholds would be a targeting device for further interventions by the Commission, and would not be a de-facto and intrusive form of universal control in themselves.

5 Determining whether to impose control after a threshold breach

Once thresholds are established, the Commission must assess lines businesses against them, identify any that breach the thresholds, and determine whether or not to declare the goods and services of such a firm to be controlled.

The actions of the Commission when determining whether to impose control are to be conducted consistent with the purpose statement (i.e. to promote the efficient operation of markets for the long-term benefit of consumers). This places an obligation on the Commission to act in a way that can be demonstrated to improve, rather than impede, economic efficiency. Such a test will need to be conducted relative to the nature of any threshold breach.

Assuming thresholds are set in relation to price and service levels, it follows that a breach could relate to one, or both issues. If the breach is with respect to service levels, the investigation would need to determine whether moving to control is likely to address the service issue in an efficient manner. Similarly, if the breach is in relation to price, or both, the investigation would need to determine whether or not moving to control would be the most efficient means of addressing the issues that led to the breach.

We anticipate that such investigations could cover a wide spectrum, from relatively straightforward investigations that establish a service impairment was due to, for example, a freak weather incident, to extensive investigations related to price, service levels, and trade-offs between them. Such investigations may include assessing the reasonableness of price levels with reference to an appropriate return on the asset

base of the lines business, if the lines business is seeking to justify price levels above the threshold.

In doing so, the Commission could use the asset valuations disclosed under the Commission's information disclosure requirements (or the information disclosure regulations, as long as they remain in place) or could require additional information to be provided. Whether that would be warranted is a separate question governed by the application of the purpose statement to the circumstances. The Commission has powers under the Commerce Act to obtain additional information it requires for declaration investigation purposes.

A transparent and well-structured process for these investigations will be fundamental to their success. To that end we consider it would be desirable for the Commission, once the thresholds have been established, to propose how it intends to administer this aspect in a procedural sense, and invite comment on it.

6 Control of goods and services

Any goods and services of a lines business that the Commission declares as controlled may be only traded subject to a provisional or final authorisation, or the acceptance by the Commission of an undertaking.

In relation to final authorisations, there is a wide range of possible control mechanisms that the Commission could use. For example, it might be possible for the Commission to use a form of control similar to the threshold that was breached. This could involve the Commission requiring the lines company that provides the relevant goods and services to supply those goods or services at or below the relevant benchmarked world price.

We acknowledge that the Commission might at this stage take an approach referencing price levels to an appropriate return on the assets used by the business. Again, in doing so, the Commission could use the asset valuations disclosed under the Commission's information disclosure requirements (or the information disclosure regulations), or could require additional information to be provided. Whether that would be warranted is a separate question governed by the application of the purpose statement to the circumstances

The basis on which the Commission authorises prices and service levels, or accepts undertakings, will have major implications for investors' perception of the regulatory risk attaching to the sector.

Given the large capital expenditure requirements in the sector over the next ten years, and the obligation on the Commission to promote the efficient operation of markets, at a minimum the approach the Commission takes to setting prices for controlled goods and services needs to meet the following requirements:

- That a lines business is not precluded from setting prices at a level that enables it to retain its capital position intact for all prudent investments. This requirement has two dimensions – the manner in which the capital base for price setting purposes is determined relative to what the business has spent, and the calculation of an allowable return on that capital base. The latter needs to reflect a return for the risks of investing in the sector, including any risks attaching to optimisation or other regulatory processes.
- That any service expectations, implied or determined explicitly as part of an authorisation or undertaking, reflect consumer preferences.

Given the importance of these issues for the success of the targeted control regime, we consider it would be desirable for the Commission, once it has established the thresholds, to propose how it intends to undertake authorisations, or accept undertakings, and invite comment on that proposal, in order to reduce unnecessary sources of regulatory risk arising from an ill-informed market.

7 Conclusion

The Commission has responsibility for implementing a targeted control regime for electricity lines businesses (and associated disclosure requirements) which has four main components; information disclosure requirements, thresholds, a procedure for determining whether or not the goods and services of any individual lines business are to be controlled subsequent to a breach of thresholds, and the possible setting of prices and service levels for any goods and services that are controlled.

For the targeted control regime to meet its purpose of promoting the efficient operation of markets, these components need to be designed and implemented as an integrated package. This paper sets out an approach to best achieve this.

Energy Density	Industrial > 0.016 GWh/ICP	Horizon Buller Otago Ashburton Tasman Alpine Northpower The Power Co	Nelson Dunedin
	Residential < 0.016 GWh/ICP	Westpower Waipa Waitaki Mainpower Centralines Marlborough Counties Scanpower Powerco Top Energy Eastland The Lines Co	Orion Invercargill Vector (post merger) Hawke's Bay WEL Electralines
		Rural < 12 ICP/km	Urban > 12 ICP/km
Connection Density			

Note: The above tentative segmentation is used for illustrative purposes only.

Each segment on the CD/ED grid will have an internationally benchmarked **Price** and **Quality** threshold, providing fair value to consumers while accounting for the two primary (consumer determined) cost drivers, viz. connection density & energy density

Price Threshold & Service Quality Threshold

Profitability

Actual Cost Level

Inefficient distribution businesses will simply squeeze their profits away, and will **not** be able to pass their cost inefficiencies on to consumers through excessive prices

So How Can Businesses Seek to Increase Profits?		
By increasing price? ❌	By reducing quality and therefore needed investment, thus compromising sustainability? ❌	By reducing cost appropriately via economies of scale & specialisation, managerial & technical innovation, smart & frugal management? ✔️
❌ Cannot increase price above the (fair value) threshold ❌ If existing price below threshold at outset, then existing price becomes threshold (i.e. no taking up of price slack)	❌ Cannot reduce quality to worse than threshold ❌ Cannot risk under-investing else quality thresholds will not be achievable on sustainable basis	✔️ Diligent cost efficiency is the only avenue open to enhance profitability ✔️ If enhanced efficiency is international trend as well, then periodic re-setting of thresholds will effectively redistribute benefits in favour of consumers