

The impact of economic regulation on a regulated lines business

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Toby Stevenson, Director Sapere, Bio

- Toby Stevenson is an economist with 35 years' experience in strategic risk management. Toby was responsible for the trading and risk management in the electricity market at Contact Energy (1996 - 2003). Contact Energy was established at the same time the New Zealand Electricity Market was established and Toby was also involved in developing the wholesale market. Before joining Contact Toby was Associate Director at Deutsche Bank in Sydney. At Deutsche Bank he was manager of the International Futures Desk.
- Toby established his energy consulting practice in 2004 with a focus on his core expert area of risk management in energy markets. He joined LECG (later to become Sapere) in 2006. He was a member of the Ministerial Review of Electricity Market Performance in New Zealand conducted in 2009 – 2010.
- Toby has provided independent expert evidence in the Environment Court of New Zealand, the Employment Relations Authority of New Zealand, the Federal Court in Australia and the High Court in Ireland. He provided independent expert testimony to the Energy Regulatory Commission of the Philippines in Manila in October 2019.

Brief for workshop with TDC councillors

Clarify the impact of economic regulation on Alpine Energy. In particular, explain the realities for TDHL of being a (47.5%) owner and whether consumers can be better or worse off with different owners.

Specifically:

1. What are the roles of the regulators?
2. How has economic regulation for EDBs changed since 2000?
3. How do regulators influence lines charges, asset management and service quality?
4. What is the tolerance for lines companies to raise/lower their prices or under/over invest to meet their own ROI objectives?
5. What are the implications of electrification, notably rooftop solar, batteries and EV charging, for network operation?
6. The relevance of ownership on EDB outcomes

Executive Summary

- **Lines charges.** The maximum allowable lines charges are based on maximum revenue allowances set by the Commerce Commission. There is no scope for a regulated EDB to raise charges above these.
- **Distribution pricing,** Allocation of charges across users is overseen by the Electricity Authority. Pricing should be cost-reflective, send efficient signals for network use and no cross subsidisation
- **Continuity of Service (Quality).** Minimum standards (frequency and duration of outages) are set and monitored by the Commerce Commission. A failure to meet the quality standards leads to hefty fines.
- **Investment (Asset Management).** The Commerce Commission helps shape how EDBs plan, maintain, and invest in their networks to ensure they meet quality standards.
- **Electrification.** Electrification through conversion away from fossil fuels use will result in a high level of network investment over the coming decade.

1. The roles of the regulators

- Regulators influence EDBs decision making: The Commerce Commission (ComCom) as economic regulator and the Electricity Authority (EA) as market regulator.
- The ComCom protects consumers against extraction of monopoly rents by lines businesses. This is achieved through the application of regulations covering price and quality under Part 4 of the Commerce Act. These regulations aim to ensure the **combination of prices and quality are fair and efficient** i.e. that consumer interests are promoted regardless of an owner's preferences.
- The EA's statutory objective require it to promote competition, reliability and economic efficiency for the long term interest of consumers. In particular the EA's distribution pricing principles and active reform programme protect against cross subsidy of lines charges between consumer groups.

2. How economic regulation has changed since 2000

The Electricity Industry Reform Act 1998 required ownership separation of distribution and supply businesses by 31 December 2003.

The EIRA Amendment Act 2001 amended the Commerce Act 1986 and established the Commerce Commission as an economic regulator charging them with:

- control of the price or revenue of (non exempt) electricity line businesses
- administration of the electricity information disclosure regime including a review of the appropriate asset valuation methodology.

Part 4 of the Commerce Act 2008 aimed to promoting outcomes consistent with competitive markets, i.e. incentives to invest, innovate and make efficiency gains, requiring suppliers to share gains with consumers and limiting excessive profits.

Part 4 required the ComCom to develop input methodologies (IMs) for regulation. The IMs apply to key components of the regulatory regime such as how ComCom value assets, allocate costs, share risk between businesses and consumers, and determine how businesses are compensated for their investments.

From 2020 Part 4 subjected EDBs to a default price-quality path (DPP) i.e. maximum allowed prices and minimum service standards. Prices became a function of a revenue cap rather than a “weighted average price cap”.

3. How do regulators influence asset management and lines charges ?

Since 2008 the main elements of regulation are:

- 3.1 Arriving at the revenue recoverable through lines charges (ComCom)
- 3.2 Setting lines charges (Electricity Authority)
- 3.3 Service quality standards (ComCom)
- 3.4 Asset management (ComCom)

3.1 Setting the revenue recoverable through lines charges

- The ComCom sets revenue caps i.e. maximum total revenue for regulated EDBs This is the Price-Quality Path (**Default Price-Quality Path – DPP**) and is the mechanism that directly constrains investment and operational costs recoverable through lines charges for a given level of “quality”
- There is also the option to apply for a Customised Price-Quality Path (CPP) if the DPP does not meet the specific needs of the distributor and its customers. Requires detailed justification and Commission approval

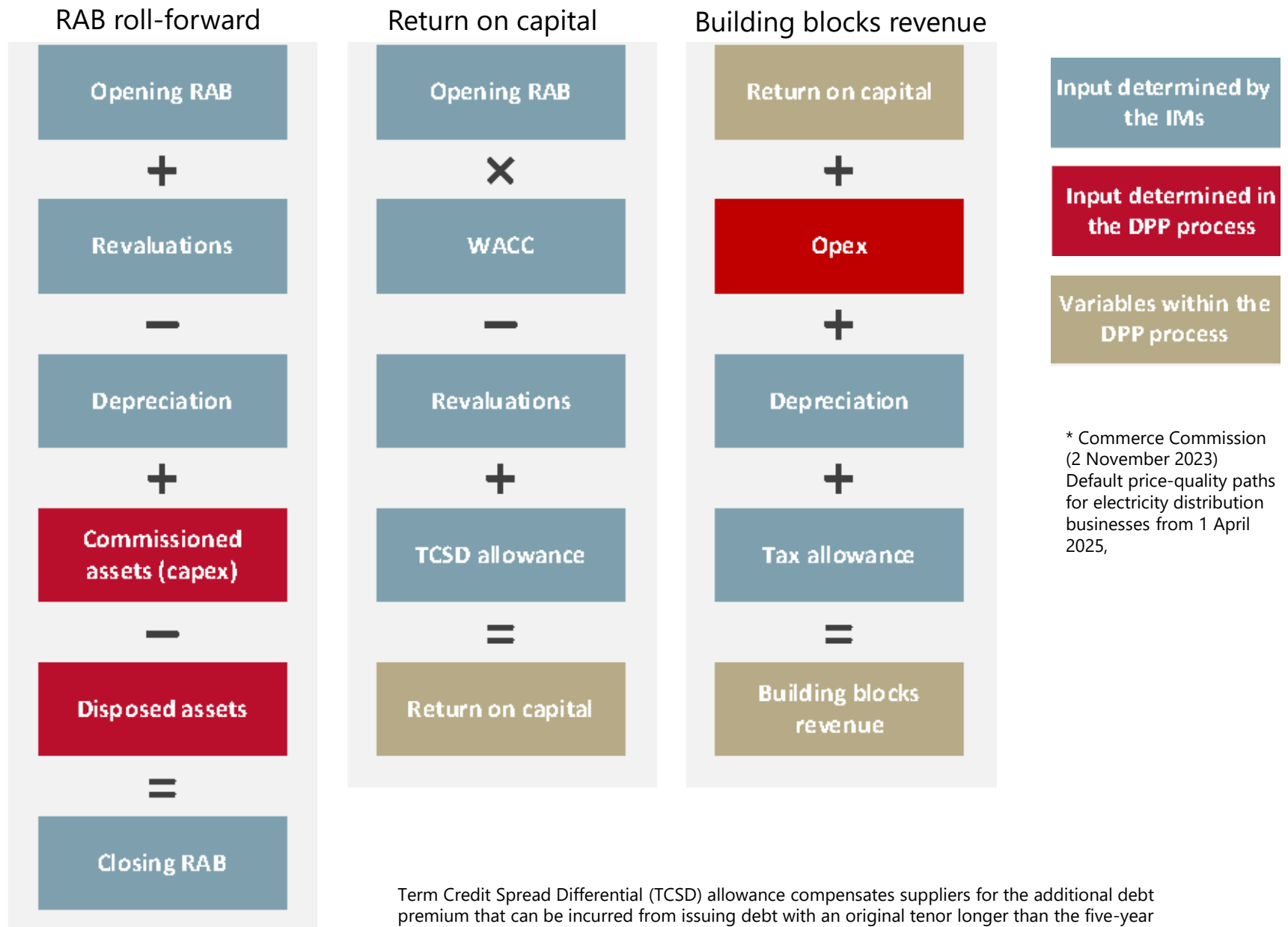
Revenue cap

EDBs can recover what the ComCom considers is the maximum revenue that reflects efficient costs (opex and capex) warranted to deliver the required quality.

Allowable costs becomes allowable revenue over each regulatory period. Projected revenue is smoothed by the rate at which prices are allowed to increase to create a maximum allowable revenue across the DPP or CPP period

This mechanism and the quality standards operate together to incentivise EDBs to manage costs efficiently and guard against possible incentives to reduce costs and maximise profits simply by lowering service quality.

Building Blocks Allowable Revenue (BBAR) approach*

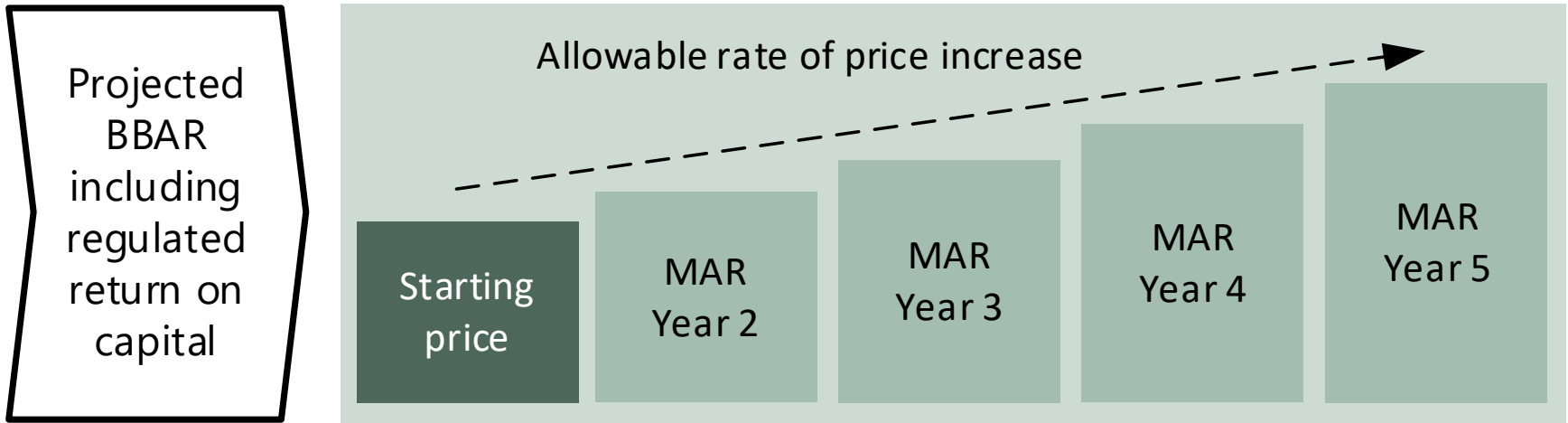


* Commerce Commission (2 November 2023) Default price-quality paths for electricity distribution businesses from 1 April 2025,

Term Credit Spread Differential (TCSD) allowance compensates suppliers for the additional debt premium that can be incurred from issuing debt with an original tenor longer than the five-year debt premium allowance implicit in the WACC. The TCSD applies to qualifying suppliers only.

Application of the revenue cap

Converting Building Blocks Allowable Revenue (BBAR) to Maximum Allowable Revenue (MAR):



What is reported in Alpine's annual financial statements:



3.2 Setting lines charges (EA)

While the Commerce Commission sets total allowable revenue, the Electricity Authority oversees how it's charged amongst consumer groups.

This may take the form of asserting:

- Cost-reflective pricing
- Reduction of cross-subsidies
- Efficient signals for network use

Distributors are required to:

- follow the Electricity Authority's 2019 Distribution pricing principles,
- publish their pricing methodology in accordance with Information Disclosure regime under part 4 (This needs to describe how distribution prices are calculated, the changes in prices, and the extent to which the pricing methodology is consistent with the above distribution pricing principles.) and,
- discuss their pricing plans and progress with the Electricity Authority each year.

3.3 Service Quality standards

- Quality and reliability standards set by ComCom reduce the risk that EDBs seek to increase profits by cutting costs and compromising quality. They are intended to require EDBs to provide services at a quality that reflects consumer demands. ComCom use measures related to the average frequency (known as SAIFI) and duration (known as SAIDI) of power outages to determine network reliability.
- The regulatory framework has evolved such that a decline in quality standards would be picked up more quickly, and the consequences on the EDB detected more quickly, than was the case, for example, with Aurora (and its sister company Delta) in 2016.

SAIDI = System Average Interruption Duration Index. It is the minutes of non-momentary electric interruptions, per year, the average customer experienced.

SAIFI = System Average Interruption Frequency Index. It is the number of non-momentary electric interruptions, per year, the average customer experienced.

On average, customers connected to the Alpine Energy network...

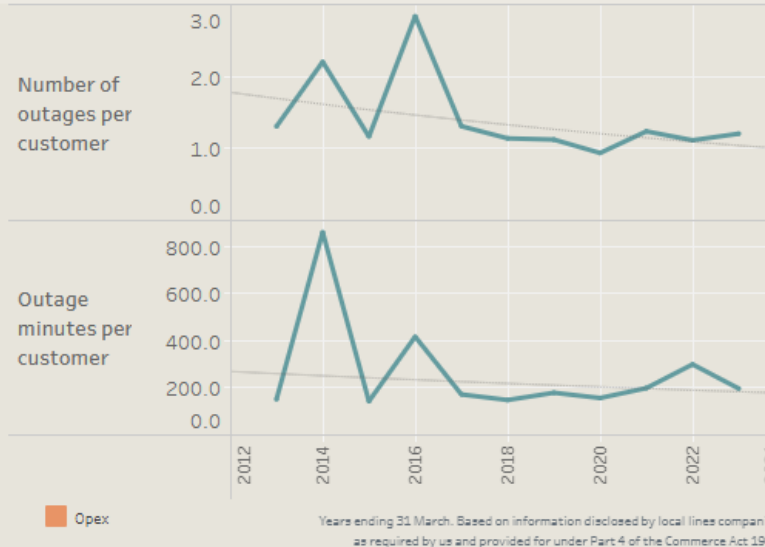
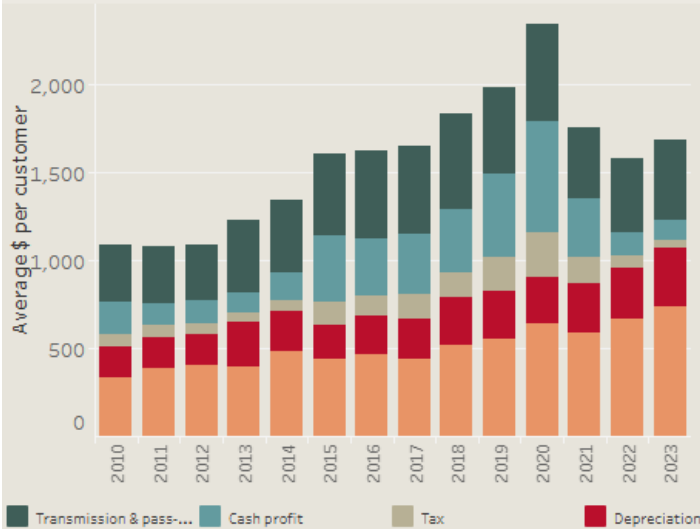
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... are likely to have paid **more** for electricity lines services compared to 2010

[Show me why](#)

... are likely to have experienced **fewer** outages and had their power out for **shorter** compared to 2013

[Show me why](#)



History

For Alpine and all NZ, from 2010 to 2023:

- Recovered costs (LHS)
- Number of outages, and outage minutes, per customer (RHS)

On average, customers in New Zealand...

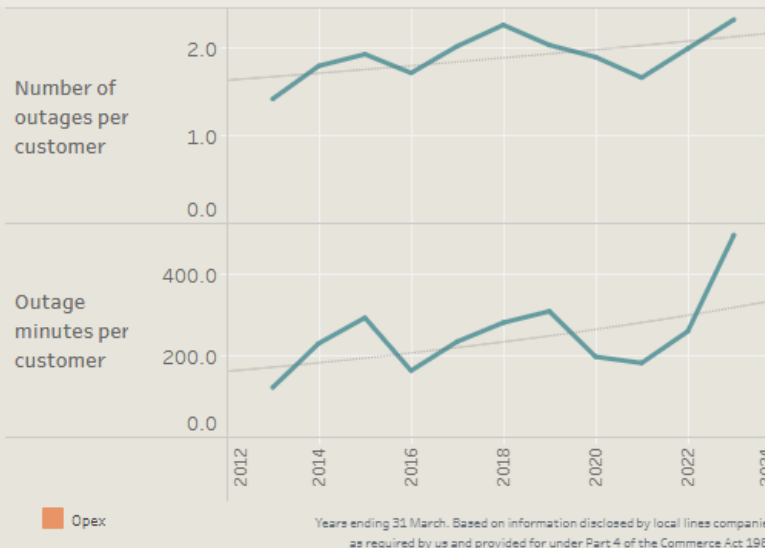
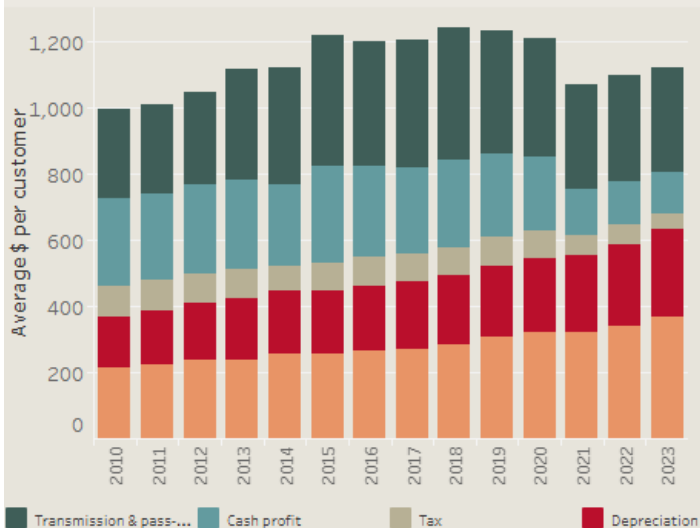
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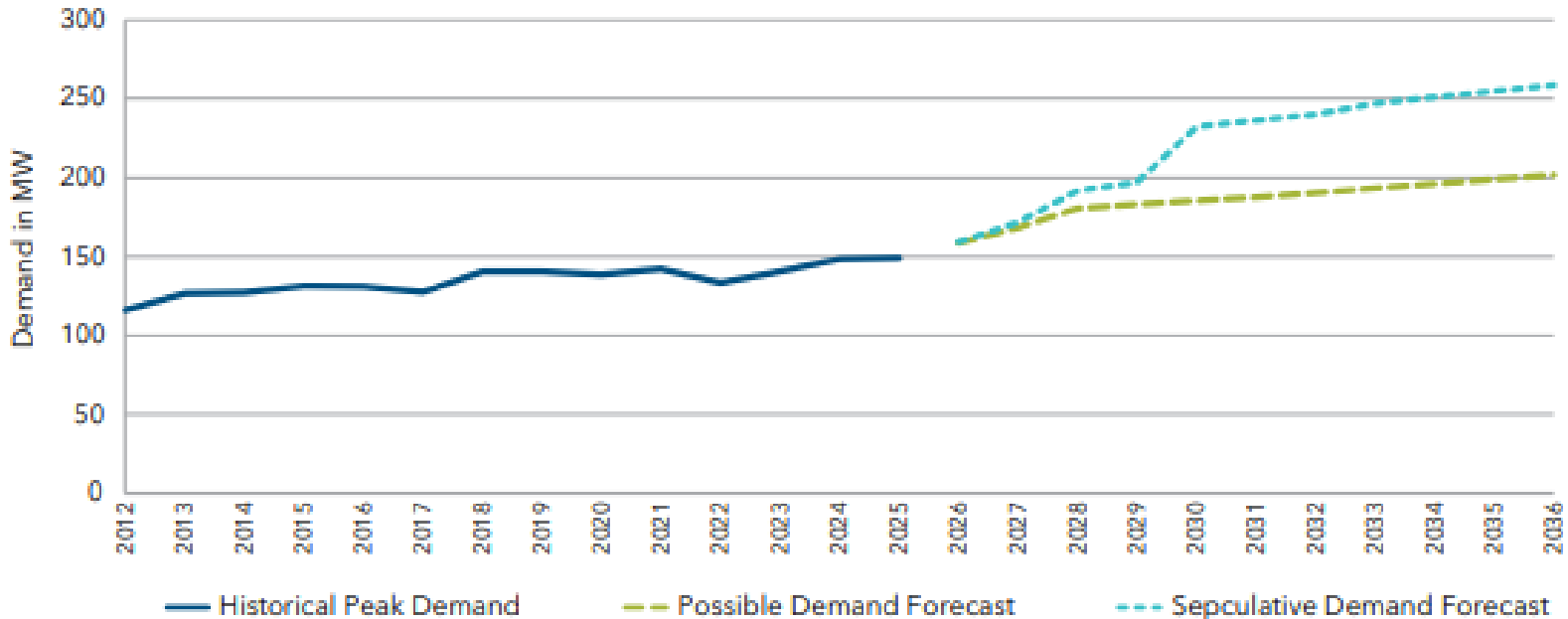
... are likely to have experienced **more** outages and had their power out for **longer** compared to 2013

[Show me why](#)



Network peak demand forecasts (Alpine AMP)

Overall Network Coincident Peak Demand

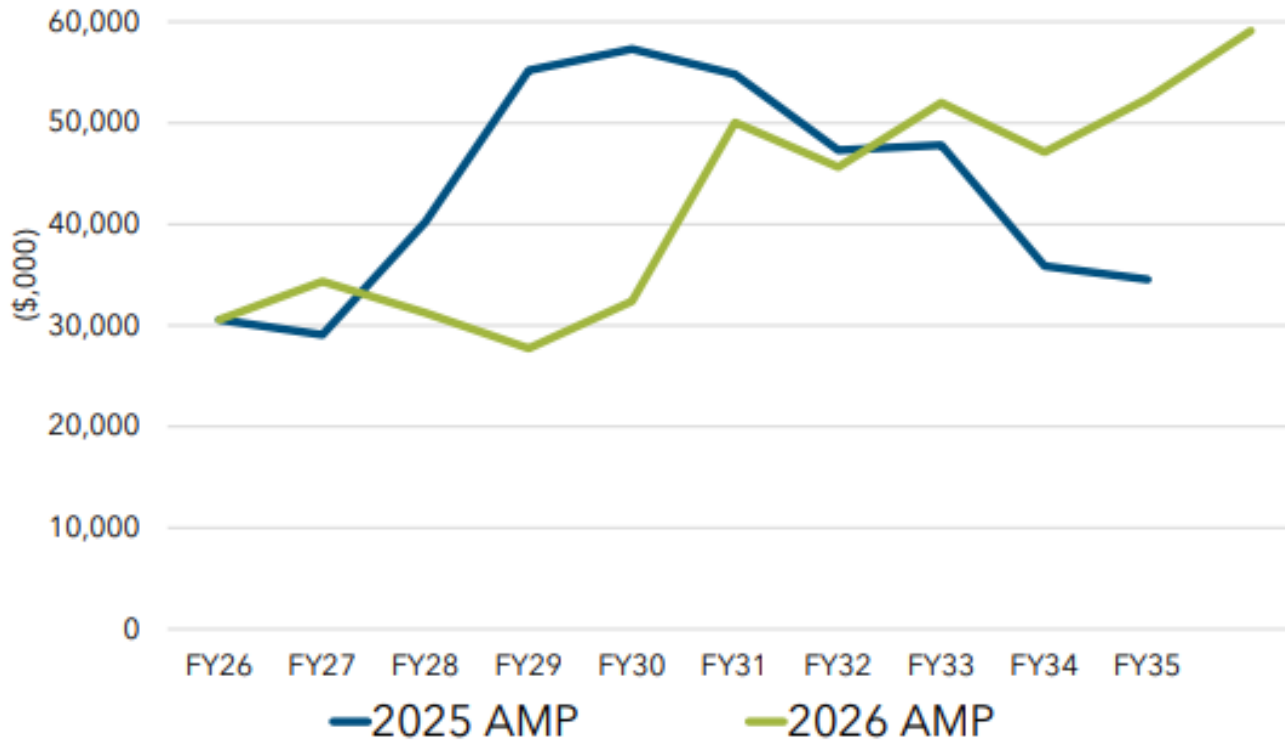


This chart shows the range of potential capacity required on the Alpine network 2026 to 2036. Alpine is making every effort to avoid overbuilding (unnecessary investment) or under building (leading to constraints on the network)

3.4 Asset Management

- The Commerce Commission helps shape how EDBs plan, maintain, and invest in their networks. Includes replace v repair, timing of upgrades, non-transmission solutions (NTS) and investment in resilience
- EDBs must publish detailed Asset Management Plans (10 yrs). ComCom reviews these to ensure spending (capex and opex) is prudent and efficient and is justified by demand or reliability needs
- ComCom sets quality thresholds (e.g., outage limits). If performance drops below the standard there are financial penalties. This is what forces EDBs to maintain assets properly and prevents underinvestment to boost profits

Forecast CAPEX (Alpine AMP)



10 year forecast of total network capital expenditure (CAPEX) is \$432 million.

The 2026 AMP shows the latest capex profile reflecting expectations of demand growth, more accurate condition information than the previous projection, and a focus on delivering the critical renewal and resilience projects.

Schedule 17 of Electricity Distribution Information Disclosure

Directors of each regulated EDB are required to certify:

- Disclosures comply with the most recent Electricity Distribution Information Disclosure Determination in all material respects
- The prospective financial or non-financial information included in the disclosures has been measured on a basis consistent with regulatory requirements or recognised industry standards.
- The forecasts are based on objective and reasonable assumptions which both align with the EDB's corporate vision and strategy and are documented in retained records.

4. The tolerance for lines companies to raise/lower their pricing or under/over invest

There is no scope for Alpine to:

- **raise lines prices** across the network beyond what is allowed by the Commerce Commission under part 4 of the Commerce Act.), or
- **rebalance lines charges** amongst consumer groups (beyond Alpine's judgement on the allocation of costs between consumer groups) or
- **defer maintenance** to save cost or **underinvest** under the current regulatory framework. The scope to do either is limited by:
 - the transparency of the information disclosure requirements,
 - director liability under Schedule 17 of the information disclosure requirements,
 - the reputational risk of failures on the network, and
 - the risk of a fine which would come out of net profit after tax (NPAT).

5. Implications of electrification for network operation

The Net Zero Carbon Act is driving decarbonisation through renewable generation substituting electricity for coal in process heat and electrifying transport

“Consumer Energy Resources (CER) are technologies that allow customers to generate, store, and manage their own electricity, such as rooftop solar, batteries, smart electric vehicle (EV) charging, and home energy management systems.

Uptake of rooftop solar, batteries, and smart EV charging is rising slowly. They require smarter network management to accommodate two-way flows and variable demand.

Electrification Distribution networks were set up for one way flows.

Poorly integrated CER can strain voltage and asset performance, while well-managed CER can defer investment and improve reliability.” (Alpine Energy AMP)

| | Australia | New Zealand |
|--|---------------------------|--------------------------|
| Rooftop solar as at 1Q 2026 | 6.5 mill = 44% households | 75,000 |
| Batteries with rooftop solar 1Q 2026 | 254,800 | 14,700 |
| EV sales as a proportion of sales YTD 2026 | 13.4% | 10.7% |
| Penetration (EVS + plug in hybrids) | 2-3% of the light fleet | 3.08% of the light fleet |

6. Additional slides relating to ownership

- University of Canterbury study December 2025
- Attributes of ownership in the face of electrification
- Sale of Eastland Network, November 2022

EDB Ownership, Incentives, & Performance (2025)

This (University of Canterbury) report examines how ownership structure and regulatory settings under Part 4 of the Commerce Act 1986 influence the reliability and financial performance of New Zealand electricity distribution businesses (EDBs):

“The results show that ownership structure itself is not a statistically significant determinant of either reliability or financial performance once differences in operational scale and expenditure are accounted for.

Variation across EDBs can largely be explained by network size, customer base, and investment cycles reflected in operating and capital expenditure.

Differences in performance across the sector appear to be driven more by structural and operational factors than by ownership form, with governance quality important.”

University of Canterbury, **EDBs: Ownership, Incentives, and Performance Under Part 4 of the Commerce Act 1986** Prepared for Commerce Commission 5 December 2025

Attributes for EDB owners with price quality regulation and the electrification challenge

The transition to a low carbon economy means significant growth in electrification and a lot of uncertainties. Over this period some of the attributes that will be useful for the owners of a regulated EDB are:

1. Long term investment horizons allowing a flexible dividend policy
2. Able to deal with uncertainty and risk
3. Access to capital, specifically cost-effective debt
4. Comfortable with debt to equity ratios that are consistent with ComCom's regulated cost of capital over each regulatory period
5. Experience with regulated businesses
6. Economies of scale
7. Synergies with other similar businesses esp. other regulated network businesses
8. Understanding the challenges facing EDBs with decarbonisation.

Sale of Eastland Network (2022)

Eastland Group chair Matanuku Mahuika says Eastland Network has served the region well and it will continue to do so regardless of ownership.

“The regulations that apply to Eastland Network mean there are ongoing protections for local consumers around price and quality, including quality of supply.”

Eastland Group agreed to sell Firstgas Group 100 per cent of Eastland Network.

Firstgas Group chief executive Paul Goodeve says his company brings deep skills and experience in managing and operating regulated utilities.

“Our expertise in disciplines including project management, regulation and asset management are as applicable to electricity networks as they are gas pipelines,” he says.

Firstgas is owned by Australian-based Igneo Infrastructure Partners, a leading global infrastructure asset manager. Goodeve says Firstgas and Igneo have the scale and expertise to fund the level of investment needed to enable Eastland Network to adapt to an electrified economy.