

ELECTRICITY PRICING REVIEW

DRAFT TERMS OF REFERENCE



EXECUTIVE SUMMARY

- Vector is pleased to submit on the *Electricity Pricing Review proposed terms of reference* (TOR). This inquiry, if successful, will create greater transparency across the energy sector, ensure better customer value, and enable increased customer empowerment and engagement.
- Currently the TOR is extremely broad. Vector shared the TOR with Martin Cave, who presided over the United Kingdom energy market investigation for the Competition Markets Authority (CMA). Mr Cave noted that from his experience significant resources will be required for the current TOR.
- In the United Kingdom electricity market, persistently high retail profit margins, significant concentration in electricity generation markets, and complicated tariff structures resulting in customer confusion and apathy, were found by the CMA. Concerns over similar issues drove Australia to review its electricity sector.
- Martin Cave noted potential difficulties for the New Zealand review in accessing information from parties that do not operate under regulatory transparency.
- Distribution businesses are subject to explicit economic regulation and rigorous annual regulatory filings on their business operations and financial performance. This regulation creates transparency and has the express purpose of benefiting consumers. The framework has also undergone testing within the court system through the merits review process.
- Data released by MBIE, based on New Zealand residential customers,

has demonstrated the strength of the regulatory framework as the rate of real price increases for distribution charges since 2004 is the lowest of all electricity bill segments. On Vector's network, the distribution component of residential charges has tracked in line with low inflation over the last decade.

- We anticipate the review will focus largely on achieving greater transparency in areas of the electricity system which have not had the benefit of either regulatory transparency, or, review - in some cases for a decade.
- Finally, in this period of rapidly increasing innovation and disruption, it is important to ensure regulation and policy do not obstruct the sector's natural evolution and ability to innovate. As asserted by Professor George Yarrow, prescriptive policy is 'fragile by design'.



DOMESTIC CONTEXT FOR A NEW ZEALAND REVIEW

- New Zealand has a long, 'stringy' electricity network, without external energy supply. The country is heavily dependent on a single generation source – hydroelectricity, with a mere eight weeks' storage capacity. Generation is largely centred in the lower South Island, with the majority of load demanded in the upper North Island– consequently electricity must travel substantial distances. These features create significant resilience concerns for New Zealand's electricity system.
- At the same time, new technology advancements have the capability to reduce the design vulnerabilities of our electricity system. New energy technologies are empowering consumers to choose how, when and from whom they will satisfy their energy needs – with grid supplied energy just one of many competing alternatives. Increasingly, power is in the hands of consumers, not the companies who supply them. The old electricity supply chain labels of 'generators', 'distributors' and 'retailers' are being blurred by new technology, and the natural monopoly elements present in the sector are steadily reducing.
- A fundamental market change will inevitably occur, whereby the sector will move from a "one size fits all" solution, to tailored consumer services. This increased choice stands to deliver lower energy bills and real value for consumers.
- Amid this period of innovation and disruption, the New Zealand Government has committed to a net carbon zero economy by 2050. Climate change is already challenging New Zealand's energy system with increasing rates of adverse weather events affecting supply reliability. Increased climatic uncertainty heightens the risk of New

Zealand's hydroelectricity-dominated generation profile.

- In addition to resilience and carbon neutrality, energy poverty is becoming an increasingly important issue in New Zealand's energy landscape. A recent Otago University study claims that a fifth of all New Zealanders experience energy poverty.



INTERNATIONAL CONTEXT FOR A NEW ZEALAND REVIEW

- High dominant generator/retailer profits, customer dissatisfaction, and concerns about the efficiency of the market, led the United Kingdom and Australia (both with comparable market design to New Zealand) to undertake reviews of their energy markets.
- The two year CMA investigation into the United Kingdom retail energy market produced its final report in June 2016. The CMA investigated: weak customer response and lack of engagement with domestic retail electricity markets; price discrimination and tacit coordination on the part of suppliers; supply-side barriers to entry and expansion in the prepayment segments; and the regulatory framework governing domestic retail market competition. The CMA also developed a model to test whether generation companies had capability to exercise market power to raise wholesale spot prices.
- The review found a wide variation in the prices that different domestic customers paid for energy, weak cost pass through, a lack of financial reporting of generator/retailer profitability, as well as low quality of service. The review concluded the current regulatory system limited innovation and pro-competitive change, causing the energy markets to fail to keep pace with relevant policy objectives.
- In March 2017, the Australian Competition and Consumer Commission (ACCC) was directed to review the retail electricity sector. The inquiry was the result of record profits published by dominant retailers, rising power bills, and concerns about the effectiveness of the wholesale electricity markets. The terms of reference for the ACCC included requests for analysis of: the existence and extent of any barriers to entry, expansion and/or exit in retail electricity markets; the extent and impact of vertical integration in the national electricity market; the existence of, or potential for, anti-competitive behaviour by market participants and the impact of such behaviour on consumers; the profitability of electricity retailers through time and the extent to which profits are, or are expected to be, commensurate with risk; and all wholesale market price, cost and conduct issues relevant to the inquiry. The final report is due mid-2018.
- The United Kingdom and Australia reviews create a useful precedent for New Zealand's inquiry.



FAIR AND EQUITABLE PRICE

- Vector supports the TOR focus on fair and equitable prices, and certainly supports consideration of equitable regional pricing. Vector, alongside the community and council owned electricity distribution businesses, are champions for our consumers and our regions, and have redistributed profits directly back to our community beneficiaries. Vector's majority owner Entrust has distributed more than \$1.2 billion to Auckland residents over the last decade.
- It is positive to note that the TOR proposes to evaluate the regulatory structure governing the electricity sector. While segments of New Zealand's regulatory structure have been tested, including clarification before the courts, other segments have not. Reviewing the relationship and division of labour between the Commerce Commission and Electricity Authority will mirror the considerations included in the United Kingdom review.
- Vector supports the extensive time period analysed (commencing from the establishment of competition in wholesale and retail markets), as it will better enable an accurate analysis of behaviour for energy market participants. This will help identify whether competition has delivered value for customers or whether the current framework has enabled some market participants to retain excessive profits and limit viable competition.
- Technology is key to unlocking lower consumer prices. Regulation should not pre-emptively select winners in the uptake of new technology. Technology will also be key to supporting regional price equity and efficiency, through for example, greater use of microgrids for remote regions. The government will need to be conscious of regions failing to benefit from rapidly emerging technologies.
- Vector recommends the TOR further investigate the issue of customer engagement. We believe it is important to discover why there is low customer satisfaction and high levels of disenfranchisement (as evidenced by Consumer NZ's annual electricity retailer survey), and whether this is contributing to tariff misalignment, with consumers on suboptimal tariffs for their needs.



Electricity distribution businesses can enable regional equity, operating within regions, for regional consumers, and incentivised to embrace new technology, which is often slow to reach regional New Zealand.

INFORMATION COLLECTION

- Vector is encouraged by the matters proposed for collection and assessment by the TOR. As a distribution business, our operations and financial performance are publicly disclosed. This level of transparency has proven to be beneficial to customers and the operation of the market. Shining the light on the rest of the electricity market will further encourage fair and equitable prices for consumers.
- It is fundamental to analyse each layer of the electricity sector independently, currently for example, distribution and transmission are combined to provide a misleading depiction of the sector.
- We support the review undertaking an analysis of profitability for incumbent retail/generation businesses in the time period since the establishment of retail competition. Such analysis will show whether customers are benefiting from competition, or whether the current framework has enabled businesses to create confusion, particularly between generation and retail margins (for which there has never been transparency). In the United Kingdom review, the CMA developed a profit analysis model to understand the profit margins at each layer – widely acknowledged as fundamental to the review, which concluded that there is a lack of transparency in financial reporting by vertically integrated electricity companies. A similar model will be useful for the New Zealand review.
- The CMA noted that the potential to shift margins around the supply chain makes it hard to assess profitability of vertically integrated electricity companies, and creates opportunities to deter entry at the retail level and undermines regulatory decision-making. Achieving long-term transparency in generator/retailer financial reporting is a valuable end goal for New Zealand's electricity pricing review.
- We anticipate that the information proposed for collection will be difficult to acquire and complicated by restructuring of business operations between vertically integrated elements over time. We also note the difficulties experienced by the government in the petrol price inquiry when attempting to analyse profitability.
- It is vital that the review team is provided with sufficient powers to obtain such information. It may be difficult, for example, to ascertain the true cost of generation. However, a sufficient proxy may be to expose and utilise the price paid by Tiwai Aluminium Smelter, as the benchmark for the cost of generation. As Tiwai is a significant element of New Zealand's electricity market, it is critical that this price is transparent, particularly to ensure fairness for other large electricity users, and to provide the market with confidence that no cross subsidisation exists.
- Obtaining sufficient information gathering powers and undertaking profit margin analysis over time at each business level, will be key to the success of the review.

The review is an opportunity to undertake profit analysis of market segments where no transparency currently exists, to understand whether consumers are benefiting from current market competition.

COMPETITION

- The present industry structure is not necessarily suitable for the future development of the electricity sector, given the rate of energy technology innovation. For example, new energy sources are becoming competitive with networks, reducing the natural monopoly elements present in the sector. Having the right foundations are important to ensuring customers are empowered to participate in, and are not disenfranchised by, the market.
 - The wholesale electricity market has not been independently reviewed for a decade. There are some concerning trends emerging, particularly regarding the inability of retail-only businesses to reach scale, while generator/retailers dominate the market. Consumers deserve to have total confidence that the wholesale market, which continues to experience high price volatility, is truly efficient. In a market of such significant value, even minor adjustments could result in real consumer benefit.
 - Vector recommends customer engagement be explicitly considered as part of a thorough review of the benefits of competition in the retail electricity market. The CMA concluded that the overarching feature of weak customer engagement is that it gives retailers a position of unilateral market power concerning their inactive customer base. While customer switching has often been discussed as a measure of competition, the analysis by the CMA in the United Kingdom concluded there was a strong level of customer disengagement despite retail switching activity. It is also important to identify genuine customer switching, as opposed to switching which occurs as a result of relocation.
 - 'Out of the box' new forms of competition will need to be considered.
- 7 As the lines blur between market participants, and non-market

participants enter the market, it is important that regulation does not select winners. Attempting to pre-emptively regulate represents a systematic overconfidence about the ability to predict and control the best market outcomes. Where a viable party, with both the technical expertise and will, is obstructed from delivering innovation, it will have an even more detrimental impact on consumers given the relatively small size of our country.



Consumers deserve greater transparency and confidence in the wholesale market, given its highly concentrated nature, significant value, and prolonged volatility.

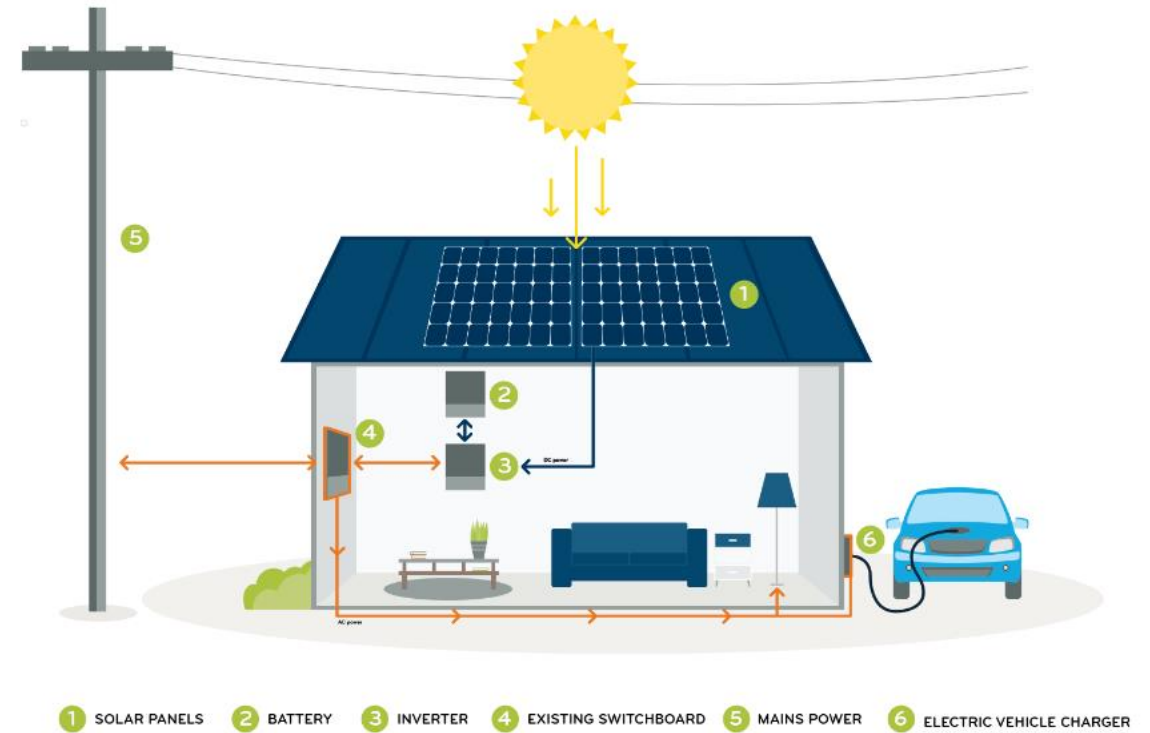
EQUITY

- As Vector is majority owned by a consumer trust, Vector strongly supports the equity considerations in the TOR.
- While each electricity distribution business is focussed on a region across the country, regional concerns are less of a consideration for other segments of the electricity sector. Competition is unevenly spread throughout New Zealand, with clear examples of innovation being slow to emerge in the regions, resulting in lost customer benefit. It is important for the government to ensure that regions do not get left behind, especially as new technology emerges and the rate of innovation increases.
- Vector consistently promotes equity considerations, championing improved customer tariff alignment, pass through of cost reductions in customer bills, the promotion of regional considerations for transmission pricing, and encouraging a more targeted solution to replace the low fixed charge regulations that is proportional to need.
- As a distribution business, Vector is transparent in its charging structure, utilising a cost of supply model to ensure that our regulated revenue, set by the Commerce Commission, is recovered from our customer segments in keeping with the cost to supply those customers.
- With respect to transmission pricing, Vector has always recommended an approach to sunk cost recovery for past transmission investments in a manner that is least distortionary and minimises the risk of perverse outcomes. The best approach to achieve the objectives of minimum distortion and perverse outcomes, is to apply a broad base transmission tariff covering all grid users (including generators – who currently only contribute to Transpower's Cook Straight High Voltage Direct Current link).
- As the government is aware, the low fixed charge regulations are a blunt instrument. Vector believes the low fixed charge regulations actually harms some vulnerable customers. Vector supports the development of new tools for energy poverty and rewards for load management and conservation by customers. We do hope any amendments to the low fixed charge regulations consider more meaningful tools for assisting disadvantaged customers, especially given no explicit mention of disadvantaged customers in the TOR. We note this featured very strongly in the United Kingdom discussions. CMA analysis highlighted that vulnerable customers are prone to disengagement, which also features heavily in the current Australian review.



FUTURE TECHNOLOGY

- New technology is key to reducing customer bills, increasing resilience, transitioning to a carbon neutral economy, and providing customers with greater control over their electricity. Therefore, impediments to embracing new technology in the regulatory environment is of vital concern.
- Electricity distribution businesses are promoters of new technology, as evidenced by the development of electric vehicle (EV) infrastructure in New Zealand and Vector's introduction of a MW grid scale battery into New Zealand two years before any other segment of the electricity market. EV infrastructure will be an area of emerging interest. Vector believes distribution businesses will play a key role in supporting the Government's EV ambition. Accelerated uptake will have implications for the electricity system, and these are likely to be experienced at the local level, where distribution businesses play a central role in ensuring system stability.
- New and disruptive technology will increasingly lead to a different market design. As costs are reduced for solar, batteries, I.T. and fuel cells for example, the incidence of alternatives to the network will multiply, exposing natural monopolies to an increasing degree of competition. This is already occurring in Australia, where domestic customers are strongly embracing solar, and rural areas are becoming self sufficient through the use of microgrids.
- It is worthwhile to note that the relatively slow uptake of new technology in New Zealand is not reflective of what is happening internationally and the review should look overseas to better understand the benefits of new technology for New Zealand. Energy independence and resilience have been key reasons for embracing new technology worldwide. Japan's recovery from the 2011 earthquake for example, embraced new technology to redesign the electricity system, ensuring greater resilience from future similar events.



New technology offers exciting opportunities for customer resilience.

ADMINISTRATIVE MATTERS – SCOPE, PROCESS, AND TIMEFRAMES

- Vector supports the issues identified as out of scope in the TOR. Relitigating issues that have been subject to extensive review and scrutiny would not best utilise the limited timeframe of the review. Furthermore, the purpose of the Input Methodologies (IMs) is to provide certainty to industry and would be undermined if matters contemplated by the first IM review were usurped by subsequent legislative changes.
- We encourage the government to consider where best to focus its review, as there is a limited timeframe to achieve the current scope set out in the TOR.
- The TOR do not have a stated overarching objective for the review, for example, *maximising economic efficiency for New Zealand*. It would be beneficial for the review and for market participants, to understand what is being sought from a successful review.
- Vector notes two important considerations absent from the TOR: (1) resilience and security of supply, and, (2) New Zealand's transition to a carbon neutral economy. As a core goal for the Government, the transition to carbon neutral must be a key consideration in the review. Reporting and analysis in New Zealand should no longer be on 'renewable' generation, but on carbon zero generation, as is occurring worldwide.
- Infrastructure investment is not explicitly recognised in the current TOR, but will need to be considered in the review. Electricity distribution businesses need to invest in long-term infrastructure to maintain stability amid increasing risks of disruptive technology and regulatory change. It is increasingly hard to obtain returns from investment, with increased risk of substitution and reducing electricity demand.
- It must be ensured, that in focussing on the price paid by consumers for electricity, flow on effects do not negatively impact the sectors ability to keep the lights on or reduce its carbon emissions.
- Vector also encourages the government to consider that during this period of disruption, it would be inappropriate to develop a prescriptive regulatory framework, which would be 'fragile by design'.
- Finally, it is vital that this review is undertaken independently and does not utilise consultants or advisors with pre-existing relationships with industry participants.
- Vector looks forward to engaging fully in the Electricity Price Review process, and will support MBIE in any way possible to ensure greater transparency across the energy sector.
- This is an exciting time to be in the sector, with significant opportunities to provide greater customer control, increase resilience, and transition to a carbon neutral economy.

