SUBMISSION ON MULTIPLE TRADING RELATIONSHIPS

27 FEBRUARY 2018

Vector®

EXECUTIVE SUMMARY

- Vector supports multiple trading relationships (MTR) that create new options for consumers and industry participants, and promote mass participation in electricity markets. As such, MTR supports Vector's objective of 'data democratisation' and vision of *creating a new energy future*.

- MTR is an important step in the electricity sector's transition into the digital age. We cannot keep on tweaking existing business models that can no longer deliver the best value for consumers.

- MTR will help ensure that the electricity industry does not leave consumers behind, while other industries, notably the financial sector, transition into the digital age. Technologies that would enable MTR exist and are expected to become more efficient over time.

- Smart metering data is available in New Zealand, albeit inaccessible to many. Improving access to data, particularly consumption data, is a critical, enabling step towards MTR.

- We support the removal of existing barriers to the flow of consumption data from those who generate or possess it to those who need it to deliver new and innovative services to consumers.

- The transition to MTR may be complex, but not making this transition will mean that the electricity industry and consumers will not benefit, or fully benefit, from what the digital economy has to offer.

- There are multiple ways in which MTR can be achieved. We encourage the Electricity Authority and industry participants to work constructively to consider practical and low-cost approaches to MTR. This could also minimise the need for complex rules.

- Any options considered for achieving MTR must ensure that the appropriate privacy and security settings are in place, and existing contractual rights and obligations are upheld.

- Vector is ready to undertake the transition to MTR with willing industry participants in the soonest possible timeframe so that the benefits from MTR can be delivered to consumers sooner rather than later.

INTRODUCTION

This is Vector Limited's (Vector) submission on the Electricity Authority's (the Authority) consultation paper on *Multiple Trading Relationships* (MTR), dated 28 November 2017.

Vector considers MTR to be a positive step for the electricity industry as it faces disruptions, and transitions into the digital age.

We are prepared to undertake the necessary steps with willing industry participants to achieve MTR, and help realise our objective of 'data democratisation' and vision of *creating a new energy future*.

We set out below our responses to the questions raised in the consultation paper. We also provide examples of how greater access to data, a critical enabling step towards MTR, benefits consumers and communities.

No part of this submission is confidential.

Vector's contact persons for this submission are indicated on the last page of this document.

...digital innovation is recombinant innovation in its purest form. Each development becomes a building block for future innovations. Progress doesn't run out; it accumulates. And the digital world doesn't respect any boundaries. It extends into the physical one, leading to cars and planes that drive themselves, printers that make parts, and so on...Digitization makes available massive bodies of data relevant to almost any situation, and this information can be infinitely reproduced and reused because it is non-rival...the number of potentially valuable building blocks is exploding around the world, and the possibilities are multiplying as never before...building blocks don't ever get eaten or otherwise used up. In fact, they increase the opportunities for future recombinations.

- Erik Brynjolfsson and Andrew McAfee,
Authors of "The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies"

✓ Creating new options for consumers and promoting mass market participation

Vector

RESPONSES TO CONSULTATION QUESTIONS

1. How material are the constraints to consumers establishing multiple trading relationships at a single connection identified above?
2. Are there other constraints that prevent multiple trading relationships from efficiently occurring? If so, please describe them.

We consider the constraints to consumers establishing MTR at a single connection to be highly material.

We agree with the Authority's assessment that current industry rules based on a one-to-one relationship between a consumer and retailer prevent consumers from having more than one retailer at a premise (the "hard constraint"). Fundamental changes to the *Electricity Industry Participation Code 2010* (the Code) and industry systems and processes would be required to overcome this hard constraint.

We further agree with the Authority that consumption data "channelled through the consumer's retailer", dictated by the one-to-one consumer-retailer relationship (the "soft constraint"), creates a barrier for other industry participants who need data to deliver new and innovative services to the market.

Another soft constraint is the change in mindset that is required to be able to make the transition to the digital age.

Disruptive new technologies are providing consumers greater choice in how they consume electricity, with an increasing number producing electricity themselves.

We cannot keep on improving or tweaking existing business models that can no longer deliver the best value for a growing number of producer-consumers or "prosumers". We need to move forward with flexibility and careful investment, and a new mindset that puts the consumer at the heart of this change.

MTR can help electricity industry participants evolve from being product/service providers that largely ignore the interests of consumers, to providers that deliver value through improved offerings.

In this context, we believe the appropriate role of regulators is to remove barriers to, and/or not obstruct, the electricity sector's natural evolution and ability to innovate.

Vector

In support of the above, we welcome the Authority's technology neutral (agnostic) definition of MTR, i.e. not specifying particular technologies that would best achieve MTR. This ensures that incumbent service providers will not be locked into their current technology solutions. It also ensures that market entrants willing to provide services that are better than existing offerings, and could be using different technologies, will not be locked out of the market (no significant barrier to entry).

Importantly, a technology neutral approach promotes choice of technology solutions and service providers that can deliver the best value for consumers.

> *...As massive technological innovation radically reshapes our world, we need to develop new business models, new technologies, and new policies that amplify our human capabilities, so every person can stay economically viable in an age of increasing automation...*
>
> *- Reid Hoffman, Co-founder and Executive Chairman of LinkedIn*

3. What do you consider to be the benefits of multiple trading relationships?
4. What other services could be enabled by reducing or removing the barriers to multiple trading relationships?

Greater choice for consumers

MTR 'changes the game' by increasing the diversity of service providers as well as technology solutions that consumers can choose from.

For example, a consumer can choose a different provider for different parts of a premise (e.g. main house, annex, or green house), or for different purposes such as electric vehicle (EV) charging or supplying electricity to a pool pump, air conditioning, hot water load, or other controllable loads.

In addition, MTR can conceivably allow consumers to have different service providers at different times of the day based on price/tariff differentials.

The increased ability of consumers to 'vote with their feet', informed by greater awareness of multiple market offerings, will help lift consumer confidence and engagement in the market.

Greater competition

Consumers' choice of service providers at their premise, enabled by MTR, will be driven by the attractiveness of competing service providers' offerings to the market.

Under MTR, the breaking down of the current one-to-one customer-retailer relationship will provide service providers with more opportunities to compete for customers with the best services they can offer. This will expand existing markets and create new ones (including for renewable energy), generating further opportunities for industry participants, driving greater market competition, and providing more options for consumers.

Increased demand side participation

Greater consumer choice from better services, enabled by MTR, is likely to increase consumer interest and participation in demand side initiatives. Consumers now have the power to 'reshape the demand curve'.

For decades, industry participants have been actively managing the supply side of the market for an 'inactive' consumer base. Having active supply and demand sides creates new markets, promoting greater competition and innovation that benefits consumers.

We are seeing increasing demand and supply side interactions or matching in other industries such as Transport as a Service (TaaS - e.g. Uber, Lyft) and travel and accommodation booking (e.g. Expedia, Airbnb).

Greater innovation

Service providers competing for consumers' votes under MTR will provide the impetus for ground-breaking products and services, enabled by new technology solutions and innovative business models.

Providers will seek to deliver services that are more tailored to particular consumers' needs, such as more transparent and innovative pricing. New pricing approaches such as peak tariff rebates (PTR), which reward consumers for using less electricity at times of peak demand, assist consumers in making decisions that benefit them (see a case study of this approach on page 15).

Energy diversity

The ability to have more than one service provider at a premise increases consumers' options in how they can actively participate in the market more efficiently, or by choice (e.g. preference for cleaner fuel source). This will enable an increasing number of consumers to integrate non-traditional and renewable sources of energy generated by their solar PV, stored by their (residential) battery, or discharged from their EV.

Vector

✓ Working constructively to consider practical and low-cost approaches to MTR

5. What changes, if any, would be needed to the switching and disconnection/reconnection processes if a consumer were able to have multiple retailers?
6. What other data exchange processes that have not been identified in this paper need to be changed to accommodate multiple trading relationships?
7. How could the data exchange processes be modified to accommodate multiple trading relationships?
8. What other services, if any, would have to share costs between multiple users?
9. How could the cost of these services be shared amongst multiple users?

There are multiple ways in which MTR can be achieved, e.g. requiring provisions on data access in contractual agreements, agreement between market participants around immediate sharing of data with a standardised customer approval process, or an industry-initiated model, etc.

We do not therefore consider it appropriate at this stage to suggest any preferred approaches so as not to limit future options. In a disruptive environment, where change in business models is occurring at the customer/ICP level, prescriptive policy is "fragile by design".

We prefer practical, low-cost, and flexible approaches to MTR that would not be onerous on industry participants and consumers.

We believe that improving access to data generated by smart meters is a critical enabling step that would prove the value of MTR. The road to MTR can be progressed by removing this "soft constraint" without waiting for more fundamental Code changes. This could result in the emergence of some trading relationships that minimise the need for complex rules.

...A regulatory strategy based only on one view of the future is unlikely to survive for long and its demise will tend to add to commercial uncertainties.

Good regulatory strategy, directed at a long-term aim, requires...that institutional arrangements be 'resilient' or 'robust', meaning that they can handle unpredictable and unpredicted environmental change without collapsing or giving rise to major dysfunctions ...Such a regulatory approach tends to be simpler than the prescriptive alternative, because it entails devolution of more of the adaptive work to other economic agents.

- George Yarrow, Chairman, Regulatory Policy Institute and Emeritus Fellow, University of Oxford

Vector

✓ Improving data provision and access to facilitate MTR

Continuation of response to questions 5-9:

Smart meters are widely deployed in New Zealand, making the country well placed to maximise the benefits of smart meters.

Near-real time consumption data is already being generated by smart meters, and the technologies required to deliver MTR are available and are expected to become more efficient over time. What is needed is access to consumption data, with the appropriate privacy and security settings.

Greater access to consumption data at the ICP level will enable service providers to better understand the unique needs of their customers and provide them with more customised solutions. For example, access to such data enables electricity distribution businesses to manage their networks more efficiently and better respond to their customers through education, signalling, pricing, and product/service customisation. It would also enable networks to optimise their investment and avoid unnecessary distribution costs.

CASE STUDY: CONSUMER BENEFITS OF GREATER DATA ACCESS

The Canterbury Earthquake Recovery Authority (CERA) used smart meter data to support its rebuild work following the 2010 and 2011 Canterbury earthquakes.

CERA used its authority to request half-hour interval data from Vector Advanced Metering Services and other metering equipment providers (MEPs). The data was used to confirm CERA's understanding of population movements in the residential, commercial, and industrial sectors.

This assisted CERA shape its horizontal infrastructure work programme and assisted other service providers in the region with their recovery efforts, by enabling CERA to provide input on future demand projections.

CERA's use of smart meter data demonstrates how greater data access can promote resilience and benefit the wider community.

Vector

- ✓ Ensuring the appropriate privacy and security settings are in place

10. Could consumer data be more efficiently shared with service providers that have a legitimate claim for access to their consumer's data? If so, how?
11. How much value is there in making it easier for appropriately authorised firms to access information such as a consumer's tariff structure, the smart meter functionality that is used by the consumer's MEP, a consumer's controllable appliances?
12. Are there other industry participants that may need to amend their systems to operate in an environment with multiple trading relationships?
13. What are the costs of the above changes recognised in questions 10-13?

As stated above, we consider access to consumption data to be a critical, enabling step towards MTR that can be addressed right away. Code changes, which can be complex and potentially contentious, can be considered for the medium to longer term.

Any MTR options for consideration would have to take into account consumer-related responsibilities stipulated in the *Privacy Act 1993*, arrangements for medically dependent and vulnerable consumers, and disconnections.

Customers' ownership of consumption data should not be permitted to be undermined by standard contractual terms.

We note that the Australian Productivity Commission's (the Commission) report on *Data Availability and Use* (March 2017) has recommended a new data framework, and a new "Consumer Right" for consumers and small and medium-sized businesses to the use of their digital data.

Specifically, the Commission recommends:

- *a new right that enables both opportunities for active data use by consumers and fundamental reform in Australia's competition policy*; and

- *a structure for data sharing and release that would allow access arrangements to be dialled up or down according to the different risks associated with different types of data, uses and use environments*.

A flexible approach (being able to be dialled up or down) could be something the Authority could consider as a guiding principle in progressing MTR.

Vector

14. What other obligations need to change if multiple traders can serve an ICP?
15. How could the obligations above be amended to accommodate multiple traders at an ICP?
16. What costs would be involved in amending consumer-related responsibilities to accommodate multiple traders at an ICP?
17. What additional matters would need to be considered if we were to introduce multiple trading relationships? What amendments would need to be made to the Code to facilitate multiple trading relationships?
18. What is the cost of the changes needed to enable multiple trading relationships?

Technically speaking, a consumer can install more than one meter at a premise, which in itself is a form of MTR. However, there is no incentive for consumers to do that because of the additional costs with no apparent benefit. We therefore envisage viable MTR arrangements to be underpinned by net metering and in-home devices. Failure to set up excellent smart meter and data transfer practices may lead to duplication costs borne by consumers.

With the advent of digitisation, we can see no reason why MTR cannot evolve or be implemented in the electricity sector.

In the financial sector, for example, a consumer can have multiple credit cards from one bank, or a number of banks – a form of MTR. The emerging model of peer-to-peer trading in different industries, including electricity, can arguably be seen as a form of MTR.

The road to MTR for electricity consumers can be progressed immediately by removing the soft constraint of data access without waiting for more fundamental Code changes. This could lead to the emergence of some trading relationships that could minimise the need for complex rules.

We suggest that the Authority consider the following in developing approaches for MTR:

- Any new Code provisions or amendments should make it easier for consumers to make use of, and benefit from, MTR.
- There should be no 'free riding' for any parties, and consumers should not be paying twice for the same service.

Practices that already reflect aspects of MTR should be retained and facilitated. For example, in most instances, metering service providers have the contractual right to provide network-related data to electricity distribution businesses. We support these rights being retained.

The transition to MTR must not undermine existing contractual rights and obligations.

Whatever options will be considered to achieve MTR, robust processes and protocols will be required to protect data from the risk of privacy breaches.

Vector

CASE STUDY: PEAK TIME REBATES

After experimenting with different rate designs over several years, Baltimore Gas and Electric (BGE) designed a peak-time rebate program for all of its residential customers who have smart meters. Called Smart Energy Rewards®, the program provides 1.1 million residential customers an opportunity to earn $1.25 per kilowatt-hour (kWh) on *Energy Savings Days*. If they are also enrolled in the Peak Rewards program, which involves providing BGE with the ability to control their central air conditioner, they may be eligible for a greater rebate.

Energy Savings Days events are declared during the summer, when electricity loads are expected to be particularly high. BGE markets the program through direct mail, advertising, digital communication, social media, and community outreach efforts. To ensure awareness and engagement, BGE partners with Opower to deliver personalized, multi-channel communications before and after events, using customers' preferred channel of communication (phone, email, or text).

During events, BGE typically makes 1.3 million phone calls, sends more than 1 million emails, and delivers around 50,000 SMS/text messages. These include a real-time call-to-action notification message and a personalized post-event message that includes the kilowatt-hours saved and the bill credit earned.

Key to messaging the kilowatt-hour reductions is ready and timely access to half-hourly consumption data. Any delay affects the feedback loop, potentially weakening engagement and, ultimately, the savings achieved by customers and utility.

Last year, on July 14, BGE called an Energy Savings Day. Its customers earned $4.6 million by reducing their energy usage between the hours of 1 p.m. and 7 p.m. From Energy Savings Days' introduction in 2013 to the end of 2016, BGE customers have earned nearly $40 million by reducing energy usage during periods of peak demand on hot summer days. The company estimates that about 80 percent of its customers reduce their usage on Energy Savings Days.

Vector

✓ Enabling consumers to benefit from MTR in a timely manner

PROGRESSING MTR

We support MTR and its evolution and implementation. The significant complexities with the current regulatory and industry arrangements that will need to be resolved to implement MTR, and their associated costs, are insufficient reasons not to pursue MTR.

While it is reasonable to expect MTR uptake to be slow early in the transition (and until data access issues are addressed), the significant consumer benefits from MTR provide a compelling reason to implement it, or at least aspects of it, in the soonest possible timeframe.

We look forward to engaging with the Authority and other industry participants during this exciting time to develop smart industry and regulatory arrangements to realise MTR.

> *Incremental costs of more open data access and use – including those associated with better risk management and alterations to business data systems – will exist but should be substantially outweighed by the opportunities presented.*
>
> *- Australian Productivity Commission's Inquiry Report on "Data Availability and Use"*

Vector

CREATING A NEW ENERGY FUTURE

CONTACT:

Richard Sharp, Head of Regulatory and Pricing, Richard.Sharp@vector.co.nz

Luz Rose, Senior Regulatory Specialist, Luz.Rose@vector.co.nz

https://www.vector.co.nz

Vector