3 November 2021

Vector Limited
101 Carlton Gore Rd
PO BOX 99882
Auckland 1149
New Zealand
+64 9 978 7788 / vector.co.nz

Electricity Authority
Level 7, Harbour Tower
2 Hunter Street
Wellington

Submission on the Refreshed Distribution Pricing Practice Note 2021

1. This is Vector Limited's (Vector) submission on the Electricity Authority's (the Authority) consultation paper, *Supporting reform to efficient distribution pricing: a refreshed Distribution Pricing Practice Note*, dated 21 September 2021. We appreciate the Authority's engagement with industry participants on this consultation through a Zoom call on 18 October 2021.

2. Vector is committed to working with the Authority, other industry participants and bodies, and our customers to ensure that our pricing methodology will help unlock greater efficiencies and optimise long-term benefits for electricity consumers in Auckland.

3. We are refreshing our Pricing Roadmap for the second time this year and will publish it this month. Our Forward Plan, which forms part of our refreshed Pricing Roadmap, considers the implications on our pricing of the phase out of the low fixed charges (LFC), the proposed (new) Transmission Pricing Methodology (TPM), and the integration of more renewable energy into our low-voltage (LV) network.

4. We set out our responses to the Authority's questions below using the submission template provided by the Authority for this consultation. We make suggestions on the role the Authority can play to enable distributors to further promote the Distribution Pricing Principles, including:

   - reflecting consumers' voice more strongly in the Practice Note and Pricing Scorecard, which can be informed by distributors' increasing understanding of their customers, enabled by data analytics;
   - ensuring distribution pricing signals are passed through in some form in retail prices;
   - introducing changes to the *Electricity Industry Participation Code 2010* (the Code) that provide distributors greater and timely access to smart meter data;
   - enhancing LV network visibility through a review of the ICP registry and the development of a low-cost DER register; and
   - facilitating industry-based discussions and more regular engagements with distributors on their pricing methodologies.

5. We are happy to discuss any aspects of this submission with the Authority. Please contact me at Richard.Sharp@vector.co.nz.

6. No part of this submission is confidential, and we are happy for the Authority to publish it in its entirety.

Yours sincerely
For and on behalf of Vector Limited

Richard Sharp
GM Economic Regulation & Pricing

Distribution pricing consultation submission template

Submitter: Vector

Supporting reform to efficient distribution pricing: a refreshed Distribution Pricing Practice Note

Q1. Do expectations laid out in the updated Practice Note on what 'good looks like' for efficient pricing provide a useful guide?

Vector broadly agrees with the expectations laid out in the updated Distribution Pricing Practice Note on 'what good looks like' for efficient pricing. We agree that current distribution pricing structures, which recover the majority of revenue via flat volumetric tariffs, need to change. In addition, we make suggestions we believe can further promote more efficient pricing and the long-term interest of electricity consumers.

We suggest that the Authority cast a wider lens in assessing the merits of different distribution pricing options, instead of focusing narrowly on cost reflectivity and treating it as an end rather than a means to improving consumer outcomes. In our view, the pricing reform process needs to be consumer-centred, with the consumers' voice reflected more strongly in the Pricing Note.

For reform to be durable, it is important that we bring consumers along the journey towards more efficient pricing and the transition to new technologies. Pricing reform should take account of consumer preferences and the potential for significant short-term bill impacts. For example, some pricing options may be complex and difficult for consumers to understand and respond to or may lead to significant adverse bill impacts on particular consumer groups.

Insufficient consumer engagement can generate negative sentiment and erode confidence and trust in the industry. The New Zealand and Australian electricity industries are no strangers to consumer/stakeholder backlash:

https://www.odt.co.nz/regions/central-otago/high-aurora-rank-rankles-mayors

https://www.stuff.co.nz/business/industries/82451890/unison-networks-defends-price-hike-for-consumers-with-solar-panels

https://theconversation.com/smart-meters-dumb-policy-the-victorian-experience-47685

We suggest that the Authority undertake or commission an assessment of the acceptability of different pricing models to consumers, including consumer sentiment about moving to a new or different tariff.

We share the view of other distributors that distribution pricing reform efforts may be distorted, muted or lost when pricing signals are not passed through to end consumers when retailers re-bundle their prices. There appears to be little return from developing more sophisticated price signals that are not passed through and are therefore not seen by consumers, for whom pricing reform is intended to benefit.

We further suggest that the Authority undertake an assessment whether price signals are passed through and consider measures that can be put in place if this is not the case, e.g. itemisation of distribution prices on consumer bills.

In addition, we would support the inclusion of a more general principle in the Pricing Note that sets out the high-level goals of distribution pricing – to ensure that pricing reform is leading towards these goals. Goals would include, for example, facilitating the uptake of new technology, ensuring revenue stability, and enabling the transition to a low carbon future.

Q2. Do you consider any of the material to be incorrect, subjective or superfluous?

Q3. Are there edits or further explanation that you'd suggest to improve clarity?

Q4. Is there material missing that would also be useful?

Note: Where you are asking us to include more material in the Practice Note, we would appreciate you explaining what you are seeking in as much detail as possible, to ensure that any further changes we make meet the need identified.

Please also consider whether any additional material is best developed and agreed with industry, or if the Authority is best placed to provide the directive solely.

Consumer engagement and acceptance

Given the importance of ensuring any pricing decisions are in consumers' long-term interest, we would have liked to have seen the engagements undertaken with customers/customer representatives, retailers and other key stakeholders as part of the process of updating the Practice Note. At present, the process seems very inward looking and we would like to see more external party involvement to ensure it captures consumer sentiment and consumer acceptance (relating to tariff changes).

As indicated in our response to Q1, consumer acceptance of pricing changes is important to prevent the erosion of consumer confidence and trust in the industry. The need for consumer engagement on pricing not only by distributors but also by the regulator will become even more important as the integration of more distributed energy resources (DER) into the grid could have dramatic implications for pricing, and hence, on consumers.

We suggest that the Authority include in its forward work plan an assessment of how effective pricing signals are in reaching end customers and the role retailers are expected to play to ensure pass through is apparent.

Transmission pricing

Approximately one-third of our bill covers transmission cost and there are discrepancies between how Transpower is expected to set prices under the TPM guidelines and how we are expected to set prices in the Distribution Pricing Note. We query how these discrepancies should be managed. How should the signals being sent to distributors through the TPM be reflected by distributors to their customers? If under the new TPM charges are allocated to GXPs, should these be reflected through to customers/retailers on a GXP by GXP basis? We suggest that the Authority include a clarification of this issue in the refreshed Pricing Note.

Technology and pricing

While critically important, pricing reform should not be viewed as the sole solution to achieving greater efficiencies and better consumer outcomes. Technology will play an important role that may influence what consumers value, or value more, e.g. remote controlled smart EV charging. Many consumers do not have the time, information, or desire to respond to complex price signals, and may prefer simplicity and convenience.

Providing consumers with better information and improving communications to consumers, e.g. on the impact of new DER technical standards, can go a long way to avoid consumer consternation.

Other pricing approaches

As part of the evolution of pricing in the context of rapidly evolving technologies, the Authority could consider other pricing approaches such as the Whole of Energy System Cost (WESC)

approach and how this could be relevant for the development of future distribution pricing methodologies.

Q5. Are the expectations laid out in the updated Practice Note on timing for reform achievable?

"Most people overestimate what they can do in one year and underestimate what they can do in ten years."

Pricing reform will likely take more than a year or two, as constraints such as LFC and limited access to smart meter data that are beyond distributors' control – while being addressed – will take time to be fully resolved. Technologies and the business models they enable are rapidly evolving, making them more capable of supporting pricing reform, and a lot of this is happening in the background and may not be visible to the Authority.

Current and potential challenges

Introducing more complex pricing options will add to lead times in implementing pricing reform, reinforcing the case for pursuing simpler options that are more likely to be accepted by customers. We prefer a steady pace of reform that would not result in massive disruption and bill shocks for our customers.

The timing of tariff changes could also be constrained by distributors' capex and opex budgets being 'locked in' until the next regulatory reset. Any radical departure from current pricing arrangements could be costly for distributors and result in bill shocks for their customers, or some of their customers.

There are also constraints in the capability of other market participants. For example, some retailers may not have invested in the appropriate IT systems to be able to reflect localised tariffs from each distributor they operate under. Having access to smart meter data does not mean a distributor has the capabilities to refine a pricing scheme based on that data right away; there are trade-offs and inconsistencies in participants' preparedness that need to be considered.

Timing could also be contingent on retailers' or some retailers' willingness or ability to change prices, which could result in a loss of customers. It would be helpful to better understand what more complex distribution pricing means for retailers.

Vector's pricing reform journey

Vector's Forward Plan, which forms part of our second refreshed Pricing Roadmap this year, considers the implications on our pricing of: 1) the LFC phase out, 2) the proposed TPM, 3) the integration of more renewable energy into our LV network, and 4) the Government's decarbonisation objectives. Our Forward Plan includes the following elements, among others:

- beneficial pricing for controlled loads;
- peak to off-peak differential and time periods for mass market tariffs;
- embedded network tariffs (distribution only);
- reviewing interaction between power factor and injection; and
- cycles of consultation, insights, economics, and best practice.

We have received the first tranche of half-hourly consumption data from a few retailers last month, and we anticipate that access to network operations data will take more time as it is a new service that MEPs must develop. Ongoing access to smart meter data will provide us with greater transparency of our customers' consumption patterns and better visibility into our LV network, enabling us to implement some pricing reform initiatives sooner rather than later.

Even those with full access to smart data from the outset – such as the distributors in the state of Victoria in Australia – took some time to optimise the value of their smart meter data. For example, smart electricity meters were first deployed in Victoria in 2006 and it was only in 2020 that Jemena (one of the Victorian distributors) announced that it has built the JAWS platform with the assistance of Amazon Web Services and Deloitte Australia that enables it to mine the billions of network data points collected by electricity meters in the state.

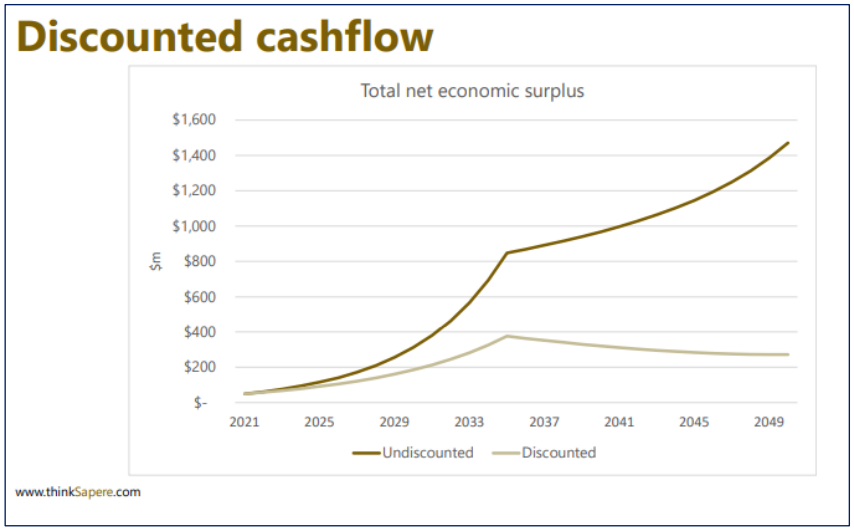
> https://www2.deloitte.com/au/en/pages/technology/articles/deloitte-transforms-jemena-data-driven-customer-centric-organisation.html

The dividends from the JAWS platform include enabling Jemena to, among others: 1) predict electricity consumption patterns with machine learning, 2) detect solar panels and battery installations for better network planning and management, 3) achieve market segmentation on a detailed level (which is important for developing more efficient pricing models), and 4) identify vulnerable users, promoting energy affordability.

DER integration into the grid

New Zealand is not currently experiencing the same network constraints and technical challenges that arise in areas with very high penetration of DER as seen in parts of Australia. High levels of DER uptake have resulted in a range of power quality, reliability, and system security risks that have required regulatory solutions that may not be relevant for New Zealand distribution networks.

We note that the Sapere Research Group report, commissioned by the Authority to inform its consultation on updating the regulatory settings for distribution networks, suggests that the material benefits from DER will not be realised until after 2030 (see table below from the Sapere report[1]). This gives distributors and other industry participants opportunities to learn and innovate and deliver new and improved services to consumers.



It would be reasonable to expect the Authority to align its pricing reform timing expectations with its DER integration timing expectations.

While flexibility services are immature, greater prescription (including in pricing) could create unintended barriers to DER adoption/integration, the development of more/advanced flexibility services, and greater mass market participation. We need arrangements that remove these

[1] https://www.ea.govt.nz/assets/dms-assets/28/Sapere-slides-Presenting-the-CBA-performed-on-the-potential-of-DER.pdf, page 31

barriers and allow regulatory frameworks to evolve, innovation to flourish, and new solutions to be developed.

Q6. Do you believe it is useful for the Practice Note to become a 'living document' that is refreshed regularly to update for the Authority and industry's understanding?

Note: Considerations include, the frequency of updates and the associated consultation with stakeholders being most useful; the level of detail that provides useful guidance, and what focus future iterations could have.

Vector believes it is useful for the Practice Note to become a 'living document', at least for the foreseeable future. A refresh of the Practice Note every two years would be appropriate to guide the Authority in monitoring and assessing distributors' alignment with the Distribution Pricing Principles. And for distributors to consider ways to improve or update their pricing methodologies to deliver greater benefits to their customers.

In addition to updating the Practice Note, we consider it useful for the Authority to have bilateral and smaller group discussions with distributors in between updates. This would enable the Authority to have a better understanding of the practical challenges each distributor faces (e.g. trade-offs they need to make) and identify new pricing related issues or issues of increasing or declining relevance relative to the current Practice Note.

Q7. Where questions of data access or use do not fall into the Updating regulatory settings for distribution networks consultation, is there any specific pricing-relating data concerns that the Authority should know, or be involved in?

Vector and many other distributors have experienced issues with accessing half-hourly consumption data currently generated by smart meters and used for wholesale market reconciliation.

Smart meter data on electricity consumption and power quality are key inputs in identifying changing consumption patterns and the impact of increasing DER integration into the LV network. These changes, influenced by the COVID-19 pandemic, new technologies, and the transition to a low carbon future create great uncertainty (e.g. changing load profiles) and the need for flexibility and responsiveness to change. Distributor access to smart meter data is therefore critical to be able to better understand these changes and their implications for the development of our pricing methodology.

While we consider the development of the new Data Template in the Default Distributor Agreement (DDA) to be a step in the right direction, there remain a number of limitations that materially restrict distributors' ability to use, combine, or share such data in the most effective way for their existing network operations. For example, distributors are prohibited from providing data obtained through the Data Template to third parties without the permission of individual retailers, which is unworkable in practice.

The Electricity Networks Association (ENA) and its members expended significant effort to arrange data access by working with retailers to develop an amendment to the DDA Data Template. The proposed amendment was not adopted by the Authority, and we must now pursue access to consumption data individually from each retailer. This is a time-consuming process and is a barrier to the development of non-network alternatives, which could significantly influence pricing – for example, our ability to undertake geographic targeting and develop a more granular customer pricing model.

While we have started receiving the first tranche of half-hourly consumption data last month and expect more in the coming months, we do not expect there to be sufficient time to integrate it into the customer models that inform our pricing methodology. Therefore, we may again rely on

the consumption data we were able to acquire from 2015 to develop load growth scenarios across our network and inform our Asset Management Plan for 2022-2032.

We are hopeful that a modified version of the existing DDA Data Template will succeed in us getting monthly consumption data (incorporating the changes that were declined to be adopted into the Code [via the DDA Data Template] by the Authority). Given that customers may freely choose to switch to any retailer, there is a risk that the usefulness of data access will be limited if there are significant differences in how we may use data from different retailers.

Distributors are also working with metering equipment providers (MEPs) to develop a common set of smart metering data services using network operations data. This data will enable distributors to have greater visibility of their LV network and may take longer to be delivered/utilised than consumption data (see our response to Q14). It involves agreeing terms with MEPs (who may in turn have to agree terms with their retailer customers) for access to network operations data (e.g. power quality data). This is both time-consuming and complex, with privacy and other issues to consider.

Vector suggests that the Authority consider introducing changes to the Code that would help speed up distributors' access to all smart meter data. This could include changes clarifying that distributors are permitted to engage directly with MEPs to access consumption data and network operations data.

Q8. Where questions of customer contact data access or use do not fall into the Updating regulatory settings for distribution networks consultation, is there any specific pricing-relating data concerns that the Authority should know, or be involved in?

Vector suggests that the Authority clarify the use of customer contact data received via the DDA, including whether distributors can use this data for activities such as customer surveys (including pricing and other service surveys).

Q9. Engaged customers are more likely to respond and in a more predictable manner than disengaged customers. What role do you see the Authority has in supporting consumer engagement on pricing?

Consistent with our call for consumers' voice to be more strongly reflected in the Pricing Note, we suggest that the Authority canvass the experiences of consumers in New Zealand and comparable overseas jurisdictions relating to tariff changes. As many other jurisdictions have undergone or are undergoing pricing reform, this would provide useful insights into what consumers value or value more, what trade-offs they make (e.g. pricing complexity *vs* understanding their bill) and why, and the risk of consumer consternation when new tariffs are applied or presented as an option.

The Australian Energy Market Commission (AEMC) recently commissioned Newgate Research to look into consumer experiences with smart meters (which brings with it the option to move to TOU tariffs), to inform its ongoing review of the regulatory framework for metering services. The Newgate report provides some insights into consumers' sentiments about moving to a new tariff.

> Once focus group participants understood that a smart meter would typically mean they would go on a time-of-use tariff, this became their primary cost concern on the basis that this would likely be an ongoing cost while installation would be a one-off fee.
>
> While some certainly felt they would be able to change their behaviour and take advantage of this tariff, others were more uncertain and reflected a loss aversion mindset. They wanted evidence that someone in their situation would be no worse off, with some interested in seeing case studies.

> …They were not sure if a smart meter was worth the effort, especially without clarity around any additional costs involved in having one installed and the implications of being forced onto a time of use tariff.
>
> Behavioural science backs this with many people hesitant to proactively change their situation, typically exhibiting a default bias – a desire to stay with the status quo due to cognitive and informational limitations, loss aversion and inertia. To drive behavioural change among this audience they will either need a compelling incentive…
>
> …It is clear that costs – both ongoing costs associated with a time-of-use tariff and one-off fees associated with installation - are a strong factor in relation to how people feel about having a smart meter installation at their home and requesting installation. This is exacerbated by a lack of understanding around likely financial benefits.
>
> …The focus groups showed that customers wanted concrete information on the likely cost of installation, the likely impact of time-of-use tariffs, and how much they might be able to save by leveraging information they discovered via use of an app or portal linked to their smart meter.[2]

The above feedback implies the importance of having regard to how new technologies and their impact on tariffs are communicated to existing and potential customers. Insufficient consumer engagement could generate negative sentiment towards the service provider or the industry – something the New Zealand electricity sector has not been immune to. The industry needs to take consumers along in the transition to new technologies and new tariffs.

A challenge arising from conducting multiple trials is that customers involved in these trials could experience 'trial fatigue' and may be reticent in participating in further trials. This may also dampen any interest in participating in future innovative programmes offered in the market that could benefit them over time. This is something that distributors also need to manage, particularly where the pool of trial participants at this stage of market development is small, e.g. those owning EVs in specific locations.

Q10. Ensuring that targeted pricing signals impact decision makers is important in distribution pricing reform. What role do you see the Authority has in supporting an industry discussion on ensuring price signals reach consumers, taking into account the need to comply with the Commerce Act 1986?

Vector shares the view of other distributors that it is hard to see the value in developing more sophisticated distribution pricing signals if these are not passed through to consumers in some form via retailers. It is reasonable to expect to see some evidence that the pricing signals distributors have designed are generating the responses when they are expected.

As shown by the Newgate research referred to in our response to Q9, customers are wary of any pricing changes where the impact cannot be explained and are extremely negative towards any unexpected bill increases that result from any change. When retailers choose to make changes to the customer's tariff, the customer usually makes a direct association between the change in their bill and the trigger for that change.

We understand the Authority previously intended to review how electricity network price changes from a regulatory reset are passed through to the retail market. We seek clarification on the status of this initiative. We emphasise the importance of price changes (particularly price reductions) being passed through to consumers in: 1) ensuring energy affordability, 2) enabling consumers to make more informed decisions, enabled by more transparent pricing, e.g. whether to install a battery or solar PV, and 3) providing consumers greater control over their electricity

[2] https://www.aemc.gov.au/sites/default/files/documents/newgate_research_full_research_report_-_metering_review.pdf, pages 7, 25, 46 and 60

expenditure, instilling confidence and promoting participation in energy markets, e.g. through demand response programmes.

The Authority could commission research, or canvass recent or ongoing trials or studies, on consumer behaviour in response to tariff changes across New Zealand distribution areas and similar overseas jurisdictions. A better understanding of this aspect of the pricing journey would help ensure less disruptive and durable pricing changes.

Q11. Complexity in pricing structures could slow reform efforts. How do you see the Authority working with the sector to strike the correct balance?

The Authority could widen its lens by better understanding how distributors function, including having a greater appreciation of the factors that are outside our control (i.e. speed of DER uptake, access to data, speed of regulatory change).

To achieve the above, there needs to be more regular and direct dialogue between distributors and the Authority, both as a group and bilaterally. This will become increasingly important as DER could dramatically change tariffs once more dynamic pricing is introduced.

Q12. Can you provide feedback on how bill shock can be managed by industry and the Authority, to support ongoing reform of prices and not unduly impact on groups of customers?

The challenge for distributors is to implement pricing structures that result in efficient pricing for the services being delivered to customers, and that any pricing signals are well understood by customers so they do not lead to excessive "bill shock". This involves structural price changes that are gradual, with common and sunk costs being recovered over a broad base, and attention given to bill impacts particularly on vulnerable customer groups. Behavioural economics has shown that consumers also consider fairness a key consideration. As a consequence**,** a theoretically efficient pricing structure may not be considered fair by consumers. This is a key consideration in whether bill shock is manageable and an aspect that can be elicited via consumer engagement.

Distributors are internally accountable to their board and shareholders (who in many cases are also their customers) and externally to customers and regulators. As a highly regulated business, we are attuned to the risk of bill shocks to our customers and take this issue seriously. Vector is 75.1% owned by its customers through Entrust and therefore faces strong incentives to act in the best interests of our customers.

Data is key to more accurately identifying our customers who are experiencing energy hardship (which can be a transient situation, e.g. customers losing income due to COVID-19) and implementing well-targeted measures for vulnerable customers. We are supportive of a cross sector, collaborative, data-based investigation of this issue.

Q13. Are there aspects of LFC and its announced phase out that you see as an ongoing impediment to pricing reform?

Vector welcomes the Government's decision to phase out LFC over a five-year period from 2022, following a recommendation by the Electricity Price Review Panel. Vector and other distributors have long been pointing out that the *Electricity (Low Fixed Charge Tariff Option For Domestic Consumers) Regulations 2004* (LFC Regulations) have introduced inefficiencies and inequities.

We share the views of many other distributors that the LFC Regulations are a significant barrier to pricing reform as they would only allow a small portion of network costs to be recovered via

fixed charges. Distributors' common costs are fixed, which would be most efficiently recovered via some form of fixed charge. However, we have limited scope in modifying the fixed component of our charges as more than 60% of the residential customers on Vector's network are currently on LFC tariffs.

The LFC phase out will help ensure our customers pay an efficient price and will not be penalised for greater consumption of electricity (which promotes decarbonisation).

As pointed out by the ENA, the phase out of the LFC will promote efficiency, energy affordability, and the use of more renewable energy:

> …60 percent of consumers currently on the low fixed charge in the most deprived areas will actually see lower charges as a result of the removal of the LFC.
>
> Those using more than 8,000 kWh per year – which often includes large families – will see a decrease in electricity charges as a result…
>
> A 2019 study by Concept Consulting determined that not removing the LFC Regulations would result in an economic cost of up to $1.5 billion over 30 years and harm the environment by adding 8 million tonnes of carbon dioxide emissions out to 2050 by disincentivising the uptake of EVs and heat pumps.
>
> Doing away with the regulations will also smooth out power bills through the year – reducing large bills during the winter months – making it easier for families which struggle to budget.[3]

Vector's Pricing Roadmap refresh in November 2021 – the second time this year – reflects our intended review of the impact of the LFC phase out and consultation on options in 2021/22, with the objective of embedding initial changes from 1 April 2022.

Q14. We are interested to better understand what ongoing limitations LV visibility issues might have that could constrain future pricing reform, how industry can respond to them and what, if any, role you see for the Authority in addressing this area?

Vector and many other distributors currently have limited visibility of their LV networks and the DER connected to them.

Smart meter data is the key ingredient in addressing this lack of visibility and better understanding the constraints on our network. It enables us to make better targeted investments in data analytics and enhance our network's capacity to host more DER. Improving information in a range of areas (e.g. EV registrations, heat pump installations, etc) would help define uses for flexibility services and non-network alternatives – which could have a profound impact on pricing.

We are not opposed to the use of alternative devices to smart meters as long as the costs of those devices are a true reflection of the actual costs incurred. For instance, we believe it is unlikely that installing additional devices at customers' premises to capture data and/or provide functionality already available from a smart meter would be cost effective or more cost effective than existing meters.

Vector is in active negotiations with two MEPs to obtain network operations data from most of the smart meters on our network. This would be a big first step to increase visibility of our LV network, and enhance our understanding of the state of our network and the DER connected to it. We have continued to use smart meter consumption data from 2015 as a foundational piece

[3] https://www.ena.org.nz/news-and-events/news/transitioning-out-of-the-low-fixed-charge-pricing-option-for-electricity/

of our system planning processes in the absence of access to the data that is being collected daily from smart meters throughout our network. We understand some distributors are also in similar discussions, and we encourage the Authority to allow these processes to take their course and help facilitate them (where and when necessary), rather than pre-empt them with new or expanded regulation.

The analysis we undertake using smart meter data will help us manage our network more efficiently and value DER appropriately (based on actual data). This would allow our customers to maximise the benefits of new technology solutions that use DER and meaningfully contribute to lowering carbon emissions.

In our view, an underlying cause of distributors' limited access to data are the provisions of the current Commerce Act Part 4 default price path (DPP) failing to fully recognise the digital transformation required to maximise long-term consumer benefits. This results in incremental spending above prescribed allowances incurring a penalty which has delayed distributors' ability to improve access to information. We suggest that the Authority engage with the Commerce Commission during its upcoming review of the Part 4 Input Methodologies to ensure regulatory settings enable, rather than limit, digital transformation.

We would support incentives for distributors to procure data, for example, by providing them with allowances under the DPP regime. This would also provide MEPs greater certainty to make the appropriate and timely investments and develop the right smart metering services for distribution networks.

Q15. Currently, installation of energy intensive devices such as EV fast chargers are not required to be notified to distributors. Do you see this this as an impediment to advancing pricing reform, and what role do you see the Authority having in this area, and how this could be done?

In Vector's view, the lack of continued access to half-hourly consumption data and network operations data is a key barrier to accelerating pricing reform. Smart meter data is important in the development and assessment of new pricing models, particularly in assessing the bill impact for individual customers transitioning to new prices.

We have reviewed our prices in conjunction with our EV trials and intend to allow EVs to become part of controllable load. Implementing this across our network would require interacting directly or indirectly in near real time (not precluding aggregators). This would also assist in the efficient integration of more renewable DER (including EVs) into the LV network, facilitating the transition to a low carbon energy future.

We note the recent industry developments around data access, as set out in our response to Q7. In addition to ongoing processes, the Authority could help facilitate timely access to data by:

- considering and introducing Code changes permitting MEPs to provide smart meter data directly to distributors;
- supporting incentives for distributors to procure smart meter data, for example, by providing them with allowances under the DPP regime; and
- facilitating industry-based discussions and development of use cases for new smart metering data services relating to DER integration into the LV network. It is not unreasonable to expect that greater uptake of DER could have a dramatic impact on distribution pricing.

In addition, resource visibility on the LV network can be enhanced with:

- a review of the ICP registry to extend its capability to identify DER installations at ICPs; and
- the development of a low-cost DER register.

These measures would help improve distributors' and the relevant market participants' visibility of the location and key characteristics of DER resources. In our submission on the Authority's recent consultation on updating the regulatory settings for distribution networks, we recommend:

> …a review of the ICP registry to extend its capability to identify DER installations at ICPs. The information needs may be similar to the Asset Capability Statements currently required by the System Operator for any generators or aggregators with greater than 1MW of generation and the DER Register maintained by the Australian Energy Market Operator (AEMO). This would improve engagement between distributors and the System Operator and provide additional data to support system security planning at regional and national levels.[4]

Furthermore, we consider the establishment of a low-cost DER register to be a 'no regrets' step that can provide significant value and visibility during the early stages of DER adoption. We envisage such a register to:

> …be a tool to help identify where DER adoption or growth on the network is occurring to assist with network planning. The Authority could consider who should administer such a register, what information is contained in it, how that information is gathered, and who can access it. In Australia, only limited parties have access to the AEMO DER Register – but our view is that it would be appropriate to make DER register data more widely available in New Zealand. A DER registry should include devices that may impact the network – in particular, including batteries and EVs. We note that the UK has acted to ensure that networks have visibility of all 'low carbon technologies' by requiring customers to notify their local network when installing solar PV, heat pumps, Electric Vehicle (EV) charging points, or battery storage to ensure safe and effective operation of the electricity networks. Ensuring that the process is easy for consumers should be a critical consideration. We suggest the most practical way to achieve this would be to extend the current installation control points (ICP) registry to include all forms of DER, but in particular EV chargers and battery storage.[5]

Q16. As we develop our thinking on further initiatives, tools or regulation, we will engage appropriately with the sector. We welcome any immediate suggestions you have regarding how we could better promote faster pricing reform.

Q17. Do you consider that the Authority has not properly understood any of the constraints listed in this paper, or has missed other issues that constrain efficient pricing reform progress and how they could be addressed?

Note: Where you provide further issues, please provide as much detail as possible.

Please also consider whether any additional issues are best addressed by industry, or if the Authority is best placed to address the issue solely.

Q18. Please do not limit your feedback to the above questions - we also welcome feedback on any other ways the Authority could work constructively with industry and consumers to support and drive accelerated pricing reform.

Q19. Please consider the role that you see appropriate for the Authority to be proactively involved in pricing evolution.

Vector welcomes the Authority's constructive feedback during its annual review of our Pricing Methodology. We believe there might be additional value in an ongoing dialogue about the

[4] Vector Limited, *Submission on Updating the Regulatory Framework for Distribution Networks*, 28 September 2021, page 14

[5] *Ibid.*, page 23

details of some of our pricing initiatives and how they are embedded within our company's overarching strategy.

Vector's Symphony Strategy puts our customers at the heart of our decision making. It is about creating a system for our customers that fits the future – delivering safe, cleaner, more reliable, and affordable energy solutions that are developed with our customers, and which helps us navigate future uncertainty. This includes customer centric pricing which involves careful consideration of the trade-off between the extent of cost-reflectivity and the practical understanding of the price signal. Consideration of bill impacts resulting from moving to new tariffs is also required. This transition needs to be carefully managed especially for vulnerable customers.

The Authority could therefore spend more time understanding how distributors operate at a working and practical level, and not purely assess them via the annual scorecard method. This would help ensure that any pricing assessment is up-to-date and captures the increasing complexity between pricing, new technologies, and the operations of electricity distribution businesses.

Vector has refreshed its Pricing Roadmap for the second time this year and will publish it this month. We have considered the Authority's feedback on our 2022 Pricing Methodology and present in our refreshed Roadmap a pricing reform horizon reaching out to 2024/25, which showcases many of our ongoing endeavours in this space. We are committed to developing innovative customer-focused tariffs that can provide customers with greater choice and flexibility, as well as incentives to reduce their energy and network costs.

In this submission, we make several suggestions on the role the Authority can play to be proactively involved in pricing evolution and enable distributors to further promote the Distribution Pricing Principles. To recap, these include:

- reflecting consumers' voice more strongly in the Distribution Practice Note and Pricing Scorecard, including undertaking or commissioning a survey of studies/trials on consumer responses to new or different tariffs. This can also be informed by distributors' increasing understanding of their customers, enabled by data analytics;
- ensuring distribution pricing signals are passed through in some form in retail prices;
- introducing Code changes that provide distributors greater and timely access to smart meter data, i.e. permitting MEPs to provide smart meter data directly to distributors;
- enhancing LV network visibility through a review of the ICP registry and the development of a low-cost DER register; and
- facilitating industry-based discussions and more regular engagements with distributors on their pricing methodologies.

Q20. How the Authority could engage more with industry, either individually or through structured channels, and in formal and informal ways.

Consistent with Vector's Symphony Strategy, which emphasises collaboration with other parties and puts customers at the heart of our decision making, we prefer more regular discussions with the Authority than is currently the case. Authority-distributor engagements could be made individually or in smaller groups, rather than just every year or two when distributors' Pricing Roadmaps are assessed and/or the Pricing Note is refreshed. This would help create a shared understanding of ongoing and emerging issues that can assist with the identification of workable solutions that promote more efficient pricing in a timely manner.

There is a lot of ongoing innovation on the LV network by distributors and other parties. The multiple challenges and opportunities from undertaking innovation 'on the ground' may not be visible to the Authority through formal engagements alone, resulting in a perception of pricing inertia on distributors' part. We urge the Authority to focus on 'what's possible and what's not' in the next few years in the implementation of pricing reform.

To maximise engagement, but avoid duplication, we suggest that future engagements by the Authority with distributors on updating the regulatory settings for distribution networks also cover pricing updates and implications. This would facilitate greater understanding by the Authority of distributors' intentions and vice versa to 'avoid surprises' every year or two and engender trust.

Vector is committed to working with the Authority, other distributors and industry participants, industry bodies and, importantly, our customers to ensure that our pricing methodologies will help unlock greater efficiencies and value from our network and optimise long-term benefits for electricity consumers in the Auckland region.