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Submission on the 2021/22 and 2022/23 Levy-Funded Appropriations

Introduction

1. This is Vector Limited's (Vector) submission on the Electricity Authority's (the Authority) consultation paper on the *2021/22 and 2022/23 Levy-funded Appropriations*, published on 26 October 2021 (the Consultation Paper).
2. Vector broadly agrees with the Authority's five interrelated strategic ambitions for the electricity sector which the levy-funded appropriations are intended to support. These strategic ambitions include consumer centricity, trust and confidence, low-emissions energy, thriving competition, and innovation flourishing.
3. The electricity sector is facing a rapid transformation driven by rapidly evolving technologies and energy markets, the ongoing COVID-19 pandemic, and the transition to a digital and low carbon future. While industry participants face greater uncertainty as challenges become more complex in this context, it also creates potentially massive opportunities to optimise long-term benefits for consumers.
4. This dynamic environment calls for regulatory settings that enable greater flexibility and responsiveness to change. It requires regulators and participants to cast a wider lens and engage more effectively than ever before, to better understand new and emerging issues and what it takes to address them. Parties in transition cannot over-communicate and over-engage in this regard.
5. We set out below our responses to selected questions in the consultation paper and make suggestions we believe would enable participants to better navigate the transition and promote the achievement of the Authority's strategic ambitions.

Responses to selected consultation questions

Q1. What kinds of engagement have you or your organisation had with the Authority over the past 12 months?

6. Vector has had various kinds of engagement with the Authority over the past 12 months. These include:
 - a. written submissions on the Authority's consultation papers;
 - b. participation in online briefings and workshops hosted by the Authority;
 - c. discussions on specific topics with Authority managers and staff via Zoom calls or emails, e.g. to clarify our views or recommendations in our submissions;

- d. feedback on draft reports issued by Authority-commissioned auditors for compliance purposes;
- e. meeting with the Authority alongside cross-sector partners (the Northern Energy Group);
- f. disclosure of wholesale market information as an ancillary agent and market participant;
- g. participation in Real-Time Project (RTP) briefings via Cognise; and
- h. informal conversations with Authority managers and staff on a range of policy, regulatory and industry issues during forums or events hosted by the Authority or industry groups.

Q3. The Authority is proposing that the operational appropriation for Electricity Industry Governance and Market Operations in 2022/23 is \$94.397 million. Do you support the Authority's proposal for funding of \$94.397 million? *Note that the approximately \$3.000 million funding for RTP per year for 2021/22 and outyears was approved in February 2019 and we are not seeking feedback on RTP in this process.*

7. The lack of detailed information in the consultation paper regarding key projects under the "Electricity Industry Governance and Market Operations" appropriations limits our ability to provide informed feedback on the Authority's priorities for the coming financial year. We note that while other Authority documents provide an indication of its future priority projects, these can be subject to change, such as the projects that were re-prioritised due to COVID-19 or the August 9 event.
8. We identify below the projects we believe should be given high priority by the Authority in the coming financial year and which have significant relevance to our businesses. Most of these are forward-looking which, with the right regulatory settings, can deliver significant long-term benefits to electricity consumers.

Improved engagements with stakeholders

9. Vector's Symphony Strategy emphasises collaboration with other parties and puts customers at the heart of our decision making. We therefore strongly support the Authority's intention of continuing to "focus on improved stakeholder engagement" (section 2.24 of the Consultation Paper). This would support the Authority's strategic ambition of creating trust and confidence in the industry.
10. We prefer more regular engagements with the Authority than is currently the case. This will assist in shedding light on the multiple challenges and opportunities participants face in undertaking innovation 'on the ground' which may not be visible to the Authority through formal engagements alone. We are committed to offering the Authority transparency and see an opportunity to strengthen the Authority's understanding of network operations in particular.
11. Improved engagements between the Authority and stakeholders will help create a shared understanding of ongoing and emerging issues and each other's priorities, avoiding 'surprises'. Importantly, this will assist in the identification of potential options and preferably industry-based solutions for the issues we raise in this submission. This is particularly important as the complexity of issues increases, or they remain untested, as the industry transitions into a low carbon future.
12. As an immediate step to improving engagements, we suggest that the Authority consider re-activating the regulatory managers' briefings or facilitate similar engagements online or face-to-face at least every quarter. This would enable parties to 'touch base' with each other on the status of the Authority's ongoing and upcoming initiatives. As always, we would welcome the Authority should they wish to visit Auckland when this is possible to learn more about our operations and communities.

Updating the regulatory settings for distribution networks

13. Electricity distributors will play a key role in optimising the benefits from distributed energy resources (DER) and enabling the transition to a low carbon energy future. While the electrification of transport and process heat are expected to have significant impacts on low-voltage (LV) networks, the exact characteristics of these impacts are unknown. The uncertainty from DER installed at homes and businesses presents both a challenge and opportunity for distribution businesses.

Key priority: DER registry

One way that increased network visibility can be achieved is through a DER registry, an option considered by the Authority in its recent consultation on *Updating the regulatory settings for distribution networks*. A DER registry – which provides information on the network location of distributed assets – would provide networks with critical visibility as we manage both operational and forecasting implications of an uncertain transition – including the impact and uptake of more low carbon technologies such as EV chargers. Following the example of the UK, where consumers are required to register all ‘low carbon technologies’ with their local networks – including solar PV, heat pumps, EV charging points, and battery storage – we propose a DER registry that includes a similar range of energy using (and injecting) assets – in particular EV chargers. By improving network visibility, this information can help networks identify changes in load, supporting more efficient operational responses, and, in conjunction with consumption data can help ‘right size’ future investments by enhancing networks’ understanding of new technology impact.

For a DER registry to have the most value, it must be implemented as a matter of urgency as this is when the impact of low carbon technologies will be most uncertain. At higher EV penetration levels, for instance, information on EV installations will be less valuable. Some consideration would need to go into how this data could be captured and updated effectively without being unduly burdensome on consumers. 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, particularly EV chargers and battery storage.

14. We agree that the Authority’s stated objective of deploying an efficient and integrated mix of solutions, including the use of ‘flexibility services’ (i.e. controllable non-network solutions), will best deliver long-term consumer value. While flexibility services are still immature, pre-emptive regulatory change and a lack of guidance around future rules concerning network involvement with non-traditional technologies will create unintended barriers to: 1) DER adoption/integration, 2) the development of advanced flexibility services, and 3) greater mass market participation. We need arrangements that remove these barriers and provide the settings and standards that enable innovation to flourish and new solutions to be developed and integrated.
15. Updating the regulatory settings for distribution networks that would optimise value for consumers involves encouraging, rather than discouraging, network operations that enable platforms and non-traditional technologies. Expecting new markets and innovation to emerge without these platforms is like expecting smart phones to take off without broadband.
16. In our view, a way forward for optimising consumer outcomes from DER involves:
 - a. improving the visibility of LV networks;
 - b. improving the visibility of DER deployments and how they are affecting or may affect distribution networks and their service obligations;
 - c. refining incentives that encourage distributors to use and support flexibility services in an optimal manner and invest in digitalisation capabilities; and
 - d. mandating ‘smart’ and safe electric vehicle charging standards.
17. At this stage, and consistent with our call for improved engagements, we support the establishment of a series of industry workshops on DER issues. This would break industry

silos and inform the development of a 'no regrets' pathway aligning the entire electricity sector in unlocking and optimising long-term consumer benefits from DER.

Greater access to smart meter data

18. Smart meter data on electricity consumption and network operations (e.g. power quality) are key inputs in identifying changing consumption patterns and the impact of increasing DER integration into the LV network.
19. 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.
20. We consider the development of the Data Template that now forms part of the Default Distributor Agreement (DDA) to be a step in the right direction in improving distributors' access to consumption data. However, there are 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.
21. We are pursuing access to half-hourly consumption data individually from retailers. We have received the first tranche of data in October 2021 and expect more in the coming months. This is a time-consuming process and creates a barrier to the timely development of non-network alternatives. We are hopeful that a modified version of the existing DDA Template, incorporating changes that were declined to be adopted into the Electricity Industry Participation Code (the Code) by the Authority, will enable us to obtain monthly consumption data more seamlessly.
22. Distributors are also working with metering equipment providers (MEPs) to develop a common set of smart meter data services using network operations data. These services, which will help enable distributors to have greater visibility of their LV network, may take longer to be delivered/utilised than consumption data. It involves agreeing terms with MEPs (who may in turn have to agree terms with their retailer customers) for access to network operations data. This is both time-consuming and complex, with privacy and other issues to consider.
23. We propose that the Authority consider introducing changes to the Code that would help speed up distributors' access to smart meter data. This could include provisions clarifying that distributors are permitted to engage directly with MEPs to access consumption data and network operations data.
24. In sum, network access to and application of smart meter data can:
 - a. lower consumer costs by improving network asset planning processes and by informing innovative cost deferral projects;
 - b. improve consumer reliability by building bottom up asset monitoring and forecasting tools that predict imminent failures and assist field staff;
 - c. enable the proactive planning of the impact of DER on individual components of the network, leading to more efficient decisions and overall lower costs; and
 - d. support a more granular approach to forecasting which is necessary as the network becomes more dynamic than in the past.
25. However, as we have stated consistently for the past five years, the key to data from smart meters adding value to network operations and planning is the ability for networks to access

and use this data. Whilst this is now progressing, the Authority's approach to this through the DDA has been unduly lengthy and difficult.

Coordination with the Commerce Commission on the IM Review

26. Vector suggests that the Authority closely engage with the Commerce Commission during its upcoming review of the Commerce Act Part 4 Input Methodologies to ensure any new regulatory settings enable, rather than limit, digital transformation.
27. In our view, something which limits network access to data are the provisions of the current Commerce Act Part 4 default price path (DPP) regime which results in incremental spending above prescribed allowances incurring a penalty. This has delayed distributors' ability to improve access to data.
28. We would support incentives for distributors to procure data, for example, by providing them with allowances for this 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.

Pass through of distribution pricing signals to retail pricing

29. The impact of distribution pricing reform will be muted when distribution pricing signals are not passed through in some form in retail prices. There appears to be little return from developing more sophisticated price signals if these signals are lost or distorted when retailers re-bundle their prices. We suggest that the Authority consider investigating this issue and ensure that retailers pass through efficiencies.
30. On a related matter, we note that the Authority previously intended to improve retail price change transparency by ensuring price decreases from regulatory resets are passed through to consumers. This is important in: 1) ensuring energy affordability, 2) enabling consumers to make more informed decisions regarding DER investments, and 3) providing consumers greater control over their electricity expenditure that would instil confidence and promote their participation in energy markets.

Compliance in metering

31. Vector supports more education on compliance issues through the issuance of guidelines or practice notes, and the Authority spending more time understanding how market participants operate at a working and practical level. We support using 'carrots and education' over a punitive compliance regime that could unintentionally limit innovation. This is particularly the case around metering and related issues which are becoming more important as the role of smart metering becomes more prominent in the transition to a digital energy future.
32. In our recent submission on the Authority's Draft Compliance Strategy, dated 23 November 2021, we suggested that the Authority facilitate a "Metering Compliance Forum" for industry participants every few months. This Forum could discuss metering related issues that are causing confusion in the industry, or challenging or complex, and propose potential pathways to their resolution.
33. We also suggested that to support the above proposed Forum, or as an alternative, the Authority establish a "Metering Compliance Working Group" that would consider metering related issues (e.g. approved test house (ATH) related issues) on a day-to-day basis. This Working Group could become the first point of contact for industry participants on metering compliance issues or any proposals for improvement. The Group could include representatives from MEPs, ATHs, retailers, auditors, consumer groups, and other interested parties.

34. We further suggested that the Authority be involved in the above proposed Forum and/or Working Group so their recommendations could inform future Code changes and the development of associated guidelines and practice notes. Achieving compliance with new or amended requirements can be a discovery process. Taking stakeholders, particularly those with direct relationships with consumers, along the compliance journey would help ensure that compliance processes better promote the interest of consumers.

A more effective Standing Data Formats Group

35. In support of the above proposed Metering Compliance Forum and Metering Compliance Working Group, we suggest that the Authority ensure that the Standing Data Formats Group (SDFG) hold regular meetings. This would enable the SDFG to consider proposed improvements to the Electricity Information Exchange Protocols and Code provisions on data formats made by industry participants to the SDFG or the Authority in a timely manner.

Omnibus Code review

36. We suggest that the Authority re-activate its annual omnibus Code review process, which considers non-controversial and technical improvements to the Code to ensure greater clarity and consistency of provisions across various parts/sections of the Code. This ensures that the Code remains responsive to, and reflective of, evolving practices driven by new technologies and rising consumer expectations.
37. An omnibus Code review could also help identify systemic and more complex issues that would require further consideration by the Authority.

Q4. The Authority is proposing the contingent appropriation for Managing the Security of New Zealand's Electricity Supply renews for another six years. Do you support the Authority's proposal for maintaining this contingent funding at its current level?

38. We have no issue with the renewal of the contingent appropriation for Managing the Security of New Zealand's Electricity Supply for another six years. We note its contingent nature and that no expenditure has been incurred against this appropriation to date.

Q6. Would you like to provide any other comment on the Authority's proposed 2021/22 or 2022/23 funding?

Other factors potentially affecting security of supply

39. In considering policy and regulatory issues affecting security of supply, Vector suggests that the Authority cast a wider lens and capture issues that have ongoing, or could have, significant impact on security of supply. This could involve considering:
- emerging and increasing cyber-security risks to the electricity system;
 - the ongoing impacts of COVID-19 – for example, changes in electricity demand patterns driven by the economic slowdown and more people working remotely; and
 - ensuring energy affordability during the pandemic and other periods of crisis.

The role of gas in electricity generation during the energy transition

40. Gas has an ongoing role to play to support not only the gas industry but also electricity generation in New Zealand's transition to a low carbon future.

41. In December 2020, the Minister of Energy and Resources directed the Gas Industry Company (Gas Industry Co) to investigate, among others, how current market, commercial and regulatory settings in the gas market support security of supply in the energy market to support the energy transition. Gas Industry Co's September 2021 report on its investigation proposes a work programme that includes solutions to ensure that gas supply is available for electricity generation when it is required, particularly for dry winters. We suggest that the Authority coordinate closely with Gas Industry Co as it progresses this work programme.

Concluding comments

42. Vector looks forward to improved and fruitful engagements with the Authority in the coming months on the above and related issues.
43. We are happy to discuss any aspects of this submission with the Authority. Please contact Luz Rose (Senior Regulatory Partner) at s 9(2)(a) in the first instance.
44. 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



Robyn Holdaway
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