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Submission on Data and Data Exchange for Market Transactions

Introduction

1. This is Vector Limited's (Vector) submission on the Electricity Authority's (the Authority) consultation paper, *Data and data exchange for market transactions*, released in September 2017.

2. Vector indicated in its submission on the Authority's *2017/18 Levy-Funded Appropriations and Strategic Priorities*,[1] dated 6 December 2016, that it is ready to be disrupted and be disruptive to realise its vision of creating a new energy future. Achieving this future requires unlocking the potential of energy data that would enable market participants to deliver improved services and greater choice for consumers, provide incentives for demand side participation and optionality, and instil confidence in an increasingly disruptive market environment.

3. We therefore support, in principle, the Authority's objective of making changes to existing data and data exchange arrangements to remove barriers to innovation and mass participation in the electricity market.

4. We set out below our responses to the consultation questions which we make in conjunction with our submission on the Authority's consultation on enabling mass participation in the electricity market,[2] submitted in July 2017. Our responses are also made with regard to the Authority's upcoming consultation on multiple trading relationships (MTR), which will cover the issue of access to consumption data.

5. No part of this submission is confidential. Vector's contact person for this submission is:

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[1] https://vectorwebstoreprd.blob.core.windows.net/blob/vector/media/documents/vector-submission-2017-18-ea-levy-and-strategic-priorities.pdf

[2] https://vectorwebstoreprd.blob.core.windows.net/blob/vector/media/vector-regulatory-disclosures/submission-on-enabling-mass-market-participation-in-electricity-market.pdf

Responses to consultation questions

Q1: What inaccuracies in data and data exchanges have your experienced, for what reasons, and with what impact?

6. We strongly agree with the Authority's assessment that:

   - errors in data are both time-consuming and expensive for the receiving party to deal with;
   - a major contributing factor for these errors is human intervention and judgement; and
   - the participant who receives the error is often the party who shoulders the costs of correcting the error.

7. Some of the common errors we observe include:

   - customer addresses that are incorrect or inconsistent in EIEP4 files. There is no common standard for addresses used by participants, which often results in the same customer given different or incorrect addresses;
   - customer contact information (telephone, email, etc.) that is incomplete or incorrect, making it difficult to contact customers for planned outages; and
   - ANZSIC codes that are inconsistently completed in EIEP4 files, e.g. the codes are completely omitted or incorrectly assigned.

8. Our electricity distribution business faces the ongoing challenge of correcting inaccuracies in EIEP files from retailers. While we exert efforts to 'fool proof' our system from commonly anticipated errors and accommodate the time lag in the switching environment, we cannot anticipate all forms of errors that will occur in the future.

9. Manual preparation or manipulation of files by retailers (before they are sent to Vector) often result in errors when processing these files into our systems. While it may benefit the retailer to be able to prepare files manually, the cost of the resolution of any errors is borne by Vector.

10. As described in the consultation paper, consumers ultimately bear the costs of data inaccuracies in the form of direct costs (e.g. inaccurate bills) or poor service (e.g. wrong recipients).

11. We **recommend** that the Authority consider, subject to cost-benefit assessments, measures to minimise data inaccuracies, including incentives to avoid their recurrence. This could include, for example, requiring retailers to certify the quality of the data sent to distribution businesses.

Q2: What are the types of benefits and the costs of being able to reduce settlement periods between industry participants?

12. Reduced settlement periods provide more granularity that allow service providers to send better signals of the value of electricity to consumers, e.g. by charging different prices at different times of the day. This enables consumers to make more informed decisions whether to curtail or delay consumption or transaction at certain times, or install or use their own generation capacity. Consumers, including vulnerable and price sensitive consumers, will be able to better manage their electricity cost, avoiding surprises or 'bill shocks'. It will also reduce the number of complaints from consumers.

13. If consumers were on tariffs that provide rewards for responding to demand spikes (e.g. peak tariff rebates), shorter settlement periods mean they get their rewards sooner after they reduce or defer consumption. This further incentivises demand responses in the future.

14. Increased consumer response to demand peaks could reduce price spikes. Peak management has significant cost saving implications for the electricity supply chain – from generation (minimising the use of costly peakers or ancillary services) to transmission and distribution networks (avoiding costly new network investment or expansion). The gains from a more efficient energy system would have positive flow-on impact on end consumers.

15. Any proposed measures to reduce settlement periods should be subject to cost-benefit assessment to ensure they are likely to deliver significant net benefits for consumers.

Q3: What are the types of benefits and costs of more standardisation in data and data exchanges?

16. We agree with the Authority's assessment that standardisation enhances consistency in data definitions, formats and values, and increases efficiency in data exchanges. If we can trust the data and rely on common formats, we can confidently use the data to deliver improved and innovative products and services to consumers.

17. Vector is supportive of both standards dictating the format of the data to be supplied (file format standards) and standards relating to the data content (data accuracy and consistency).

18. Standards for file formats are important and should be retained and improved. These standards should: 1) be easy to understand and use, 2) facilitate access to information, and 3) be easy to update to support innovation.

19. The number of standard file formats could be streamlined and be limited to a basic set of information that an entrant requires to efficiently enter the market and for market participants to keep innovating.

20. *De facto* standards could emerge and evolve through commercial arrangements but could result in inconsistencies in the standards. We note that Vector Advanced Metering Services (VAMS) have created some 'standards' that are now used by retailers in their transactions

with other metering service providers (e.g. DRR – daily register reads and HERM – half-hourly element register mapping). Standards will need to be adapted over time as data systems in the future may not require dealing with data as we do today, e.g. machine-to-machine exchange, peer-to-peer trading, etc.

21. At this stage of market development, standards for the exchange of data may only require simple integration fixes (unless, for example, legacy platforms are involved). We therefore believe the improvement of data content and file format standards, which impact on data accuracy and consistency, should be prioritised.

22. We would support the Authority developing standards to improve the accuracy, completeness, and consistency of data contained in EIEP files. In particular, we would like to see a common addressing standard for all physical and postal addresses exchanged via EIEP files. This would allow market participants to trust the data they receive, which will reduce the total cost of data processing and support innovation.

Q4: What are the types of costs and benefits of using more accurate available data for settling transactions?

23. More accurate data for settling transactions helps reduce the number and magnitude of errors, and the costs of fixing those errors. This results in reduced costs for the transacting parties and consumers.

24. More accurate data provides better pricing signals that enable consumers to make more informed electricity consumption decisions. It enhances consumer confidence and supports the Authority's objective of encouraging mass participation in the electricity market.

25. Under paragraph 4.33 of the consultation paper, we seek clarification why the EA purports that aggregating half-hourly data means participants are being invoiced on estimated figures.

26. Under paragraph 4.37, it is possible that a trader provides disproportionately more non-half-hourly data to the reconciliation manager because that trader is arbitraging the spot market cost difference between:

    - the real (peaky) load of a segment of consumers; and
    - the (relatively flatter) profile of the average consumer base.

27. If this is the case, then such 'gaming' is not in the long-term interest of consumers and should be further examined.

Q5: What changes may be required to allow more buyers and sellers of products and services to access the industry's data systems in the future?

28. The regulatory framework should provide opportunities for greater access to, and use of, energy data by market participants (and potential entrants) wishing to innovate, and consumers wishing to proactively engage with the market.

29. Access to advanced metering data at ICP level is an enabler of several new services that are being provided by market participants other than retailers. These services include, among others:

- peer-to-peer retailing;
- multiple retailing;
- smart home energy management;
- smart appliance control;
- EV charge scheduling;
- demand response participation;
- retailer switch and electricity brokerage; and
- generation and battery aggregation.

30. Some of the changes required to enable the above services could require more fundamental changes to the data system or the metering market itself. This could, for example, involve allowing <u>any</u> interested market participant to access consumption data (half-hourly or data of shorter intervals) and/or provide data services that differentiate them from incumbent providers, subject to certain conditions.

31. We believe the above would be more appropriately discussed in the Authority's upcoming consultation on MTR. We intend to make a submission on that consultation.

32. We urge the Authority to keep an open mind and refrain from setting a prescriptive policy direction around changes required to the data system at this stage. Policies or regulations based on a narrow view of the future are unlikely to be durable. Prescriptive arrangements will create barriers for new technologies and business models to emerge, to the detriment of consumers. Innovation and market participation are promoted if market participants and consumers are able to form their own views about future demand and costs, and make their own investment and technology decisions.

Q6: What are the risks to security of data exchange and consumer privacy from more participants exchanging more data?

33. We concur with the Authority's view on the increased data security risks with an increase in the volume and potential sources of data.

34. In our view, the following factors will generate a new set of inter-related risks that the industry will need to consider:

- *<u>Data ownership / responsibility</u>*

  Issues can arise when datasets become fragmented across several locations and there is no longer a "single source of truth". As data is manipulated to generate new data or information, ownership of that data can also become difficult to

determine. Responsibility for control of that data on behalf of consumers may become extremely complex.

- *Privacy*

  Global developments around regulations for mandatory breach notification are becoming more prevalent. While New Zealand has considered this for many years, there is no defined deadline for when this may be implemented. The EU has recently implemented the General Data Protection Regulation (GDPR) which will apply in the UK from 25 May 2018. The definition of 'personal data' is expanding such that under the GDPR, information such as an online identifier (e.g. an IP address, ICCP number) can be classified as personal data. This increases the level of responsibility of participants to manage this data appropriately.

- *Third party risk*

  More third parties (e.g. new energy service providers and agents) are expected to provide services to support the increasing data needs of the industry and consumers. These services may include, for example, the provision of hosting services, application management and support, and security monitoring controls. This increased reliance means greater scrutiny is required over: 1) how third parties manage access to the data and data systems in delivering these services, and 2) how sufficient confidence can be obtained by the recipients of these services that service providers are delivering such services in a safe and secure manner.

- *Data sharing / availability*

  As more and more information is required to be shared, this information must be made available to both consumers and market participants (who value the information) across multiple channels in a seamless, flexible, but secure manner. Linking islands of information and consolidating them, where possible, allows legitimate users to obtain better information, and to therefore obtain more benefit from that information.

- *Identity management*

  Managing and confirming the identity of those who access data and data systems will become critical so that unauthorised access to that information can be prevented or detected in a timely manner. As volumes and sources of the same or similar datasets expand, it may no longer be sufficient to manage this based on the individual data repositories, and a consistent approach may be required.

35. The above is not an exhaustive list of all potential risks. The list does tend to indicate, however, that if these risks are not approached in a cohesive manner, it will not only increase the risk of data breach but also has the potential to create inefficiencies and unnecessary overhead costs to market participants.

Q7:	*What is your view of the Authority's overall impact assessments of the potential problems facing the electricity industry today and in the future (Table 3)? Use the Impact Assessment template in Table 10 (Appendix A) to note any changes.*
Q8:	*What other potential problems do you think impact data and data exchanges for market transactions? Use the Impact Assessment template in Table 10 (Appendix A).*

36. We generally agree with the Authority's high-level assessment of the (potential) impacts of the data and data exchange problems it identifies in the consultation paper. We believe they need to be analysed in more detail as part of the next steps in this consultation process. This can be facilitated through further submission processes, technical working groups, surveys, or a confidential information disclosure process.

Concluding comment

37. We are happy to discuss this submission with the Authority and any other issues of relevance to reducing barriers to innovation and mass participation in the electricity market.

Yours sincerely
For and on behalf of Vector Limited

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