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Electricity Authority
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Submission on the Future Operation of New Zealand's Power System

Introduction

1. Bluecurrent (formerly Vector Metering) welcomes the Electricity Authority's (the Authority) consultation paper on *The future operation of New Zealand's power system* (the Consultation Paper), dated 15 February 2024. We appreciate the Authority's engagement with stakeholders on this consultation via a webinar on 27 February 2024.
2. The power system is becoming increasingly complex as more intermittent, renewable consumer energy resources (CER) are integrated into the grid. The ability to effectively respond to the challenges and opportunities this brings requires an efficient, reliable, and modern power system.
3. Smart meters provide the "digital foundation" for a modern power system. Data generated by smart meters enables the power system and its users to 'cut through' increasing system complexity and help them make informed investment and operational decisions. This helps ensure that CER integration and orchestration processes can deliver system and end consumer benefits cost effectively – ensuring affordability and an orderly energy transition.
4. Unlocking and optimising the benefits from CER in an increasingly renewable and digitalised power system requires that the right regulatory settings are in place and remain fit-for-purpose into the transition. In this submission, we describe what we consider to be the right regulatory settings for smart metering services in a rapidly evolving environment, including providing certainty for investment and promoting market competition and innovation. We also provide our initial, high-level views on the reforms signalled by the Authority under its Distribution Reform Work Program that could change some of the regulatory settings for smart metering in the immediate future. We provide suggestions on how these reforms can best support the achievement of the Authority's objectives for the future operation of New Zealand's power system.

Responses to selected consultation questions

The current arrangements for power system operation in New Zealand

Q1. *Do you consider section 3 to be an accurate summary of the existing arrangements for power system operation in New Zealand? Please give reasons if you do not agree.*

5. Bluecurrent generally agrees with the Authority's summary of the existing arrangements for power system operation in New Zealand in section 3 of the Consultation Paper. We particularly agree that the operation of the power system will continue to evolve in response to technology advancements, changes in supply and demand, market innovation, and the drive towards electrification and decarbonisation.
6. As complexity in power system operation increases, smart meter data that provides more granular information that is increasingly able to be accessed in real-time – coupled with increasing automation

and analytics that can provide real-time insights – will offer new and innovative solutions that cut through the complexity and help de-risk the system.

7. Unlocking and optimising power system benefits requires that the right regulatory and market settings are in place and reviewed regularly to ensure they remain fit-for-purpose. In our view, the settings within which smart metering can best support an increasingly renewable power system are those that ensure that market competition and innovation can thrive into the transition. These are settings that:
 - Provide greater certainty for investment – the increasing flexibility of the modern power system requires continued investment, while minimising total system costs – which smart meters enable;
 - Promote market transparency by allowing clear and timely signals and information to be communicated to industry participants and consumers so they can make timely and informed investment and operational decisions;
 - Promote market competition and innovation, e.g. ensuring service providers and technologies are not 'locked in' or 'locked out' of the market;
 - Avoid unintended consequences such as unnecessarily increasing the regulatory burden; and
 - Deliver clear benefits for end consumers, e.g. greater consumer choice from a wider range of better market offerings.

Drivers of change to power system operation in New Zealand over the coming decades

Q2. Do you agree that we have captured the key drivers of change in New Zealand's power system operation? Please give reasons if you do not agree.

Q3. Do you have any feedback on our description of each key driver?

8. Bluecurrent broadly agrees that the Authority has captured the 'key drivers' of change in New Zealand's power system in Part 4 of the Consultation Paper. These include the electrification of the energy system, generation technology, consumer technology, operational technology, information technology, and climate change and extreme weather events.
9. Smart metering underpins many of the processes and solutions that enable industry participants and consumers to address the challenges posed, and explore opportunities created, by the above drivers of change. Smart meter data helps improve their understanding of power systems and processes through improved network visibility and timely access to data, enabling more informed decision making, e.g. investing in CER or adopting innovative tariffs.
10. The Authority's Distribution Reform Work Programme is intended to update the regulatory settings for distribution networks to optimise the benefits of CER, enabled by an efficient and reliable power system. We set out below our initial, high-level comments on the proposed reforms that would have direct implications for smart metering. We look forward to providing further and detailed comments when the Authority consults on its distribution reform proposals in the coming months.

Improving distributor visibility and coordination with flexibility providers

11. The greater granularity of smart meter data provides distributors greater visibility particularly of their low-voltage network, enabling them to efficiently integrate more renewable CER into their network. The ability to access more real-time smart meter data enables distributors to dynamically shift load, for example, by applying dynamic operating envelopes or activating demand response programs.
12. Bluecurrent is working with multiple parties to trial solutions aimed to better coordinate/orchestrate network operations, increase market participation, and deliver benefits to end customers. We are trialling hot water dynamic load control with some of our customers (retailers) with the relevant

distribution networks. We are also a participant of Kainga Ora's trial on multiple trading relationships (MTR) using surplus solar energy.

13. Bluecurrent supports the development of a regulatory sandbox framework that allows innovative and 'game-changing' solutions (such as the above) to be trialled in a time-limited manner without breaching existing provisions of the *Electricity Industry Participation Code* (the Code). While the Code exemption process that triallists currently use allows trials to proceed, this process is mainly intended for compliance purposes and provides a piecemeal solution. The main purpose of a regulatory sandbox, on the other hand, is to facilitate/fast track innovation via trials, the learnings from which could be shared with the wider electricity sector.
14. The learnings from innovative multi-party trials, including their second-order impacts on other industry participants, can also help identify any necessary changes to the Code to keep it fit-for-purpose.

Allowing metering service providers to directly enter contracts to share connection point data

15. Bluecurrent prefers that data access issues be addressed through commercial arrangements. There is clear evidence in the market that significant progress has been made, and continues to be made, by industry participants in facilitating data access via commercial arrangements. For example, Bluecurrent now has data agreements with multiple distributors, including data for trial purposes. We are happy to provide future updates to the Authority on our progress in reaching agreements for the provision of smart meter data to more distributors and other data access seekers.
16. We emphasise that the above data agreements were reached without the need for Code amendments. This approach should therefore be encouraged so that competitive and innovative commercial solutions can continue to be developed and flourish. As such, any Code amendments allowing metering service providers to contract directly with distributors and flexibility providers should adopt a principles-based approach, i.e. in the form of high-level directions rather than prescriptive provisions. This would set clear expectations on industry participants while allowing them to negotiate commercial agreements for the provision of data – promoting innovation.

Requiring metering service providers to offer standard terms for data

17. While Bluecurrent supports standard terms for data where it makes sense for our customers (retailers, distributors, end consumers and others), we consider their adoption at this stage of market development to be less relevant or unwarranted as this would/could:
 - Cut across established agreements (such as retailer-metering service provider agreements) and may create unnecessary complexity in the relevant parties' processes and for their end customers;
 - Create duplication of ongoing discussions and processes around smart meter data access, imposing unnecessary costs on the above parties;
 - Take considerable time to develop and agree and would have been more valuable had it been developed alongside the Default Distributor Agreement data template; and
 - Create uncertainty if introduced now. Bluecurrent has already developed a standardised data provision agreement (our template) and offered this to distributors in New Zealand. As indicated above, we have signed data agreements with a number of distributors. We expect to provide data to more distributors and other data access seekers such as flexibility providers.
18. The problem that the development of standard terms for data would address at this stage is not clear. Should the Authority decide to develop such terms, we suggest that this should not in any way hamper existing commercial arrangements and ongoing negotiations for data agreements. In our experience, customers often want bespoke arrangements to meet their own and their end customers' unique needs. The development of standard data terms or template should be for the purpose of providing an

additional option for accessing data – increasing choice for data access seekers – rather than as the main avenue for access.

Imposing arm's-length rules for non-network solutions

19. Bluecurrent strongly supports the Authority's proposal to develop guidelines on the threshold for extending the arm's-length rules for non-network solutions. This would ensure that non-network technology solutions that can help distributors avoid costly new network investment and expansion, or more efficiently manage their network, are delivered by those who can best provide them. This provides more options for distributors and removes any barriers for parties who can offer better solutions, i.e. other parties are not 'locked out' of the non-network solutions market. This ensures that competition and innovation can develop in this fledgling/emerging market.
20. Bluecurrent has the capability to deliver non-network technology solutions to help distributors better manage their network, e.g. alternative solar metering, dynamic load control, and other solutions for network management and related purposes.

Concluding comments

21. We are happy to further discuss with the Authority the important role of smart meters in the energy transition, including helping ensure the efficiency and reliability of New Zealand's power system in the future. Please contact Luz Rose (Senior Regulatory and Policy Partner) in the first instance at Luz.Rose@vectormetering.com.
22. No part of this submission is confidential, and we are happy for the Authority to publish it in its entirety.

Yours sincerely



Neil Williams
Chief Executive