Your views on the opportunities and challenges of a digitalised electricity system

User:

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Summary of information submitted

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Yes

Who are you submitting as? *

Innovator or technology company

First name *

Natasha

Last name *

Gillison

Email *

[redacted]

1. What could stop or slow digitalisation of the electricity system? What would make it successful? How far should digitalisation go?

For digitalisation to work, we need clear leadership and a shared vision that builds trust in the value of data.

A risk is everyone "going it alone" or too few. We end up duplicating effort, creating inconsistent standards, and slowing progress. By working together and aligning our efforts, we can streamline processes, establish consistent standards, and accelerate progress.

Equally important is actively engaging consumers, ensuring they are informed and involved every step of the way. This collaborative approach will drive a more efficient, inclusive, and successful digitalisation of the electricity system.

2. Do you agree with how we have defined 'data' and 'information', especially in the context of making data more visible?

We agree with the distinction between 'data' as raw facts and 'information' as processed, meaningful insights. In our experience, while data is increasingly available, its real value is only unlocked when it is transformed into information that supports better decisions.

The cost and effort of digitalisation are justified by the benefits of information, not just data. For information to be truly accessible, it needs to be tailored to the user's needs and level of understanding.

3. What data do you think needs to be more visible?

For residential consumers, better engagement is crucial to making behind-the-meter data and richer customer profile information more visible and valuable. Directly involving consumers is essential—not just to understand distributed energy resources (DER) like EV chargers and solar panels, but also to gain insights into how people use large load devices such as heat pumps and induction hobs. By working closely with households, we can better understand their unique characteristics, energy habits, and what motivates their participation in energy programmes.

This kind of engagement ensures that data collection is meaningful and that consumers see real value in sharing their information. When consumers are part of the process, the resulting insights lead to more personalised services, improved demand response, and greater opportunities for everyone to participate in the evolving electricity system.

For commercial and industrial consumers, the focus shifts to understanding the type of business operating at each premise and the specific energy needs that come with it. Greater visibility of this data allows for tailored solutions that can improve demand response and operational efficiency. For example, knowing whether a site is a manufacturing plant, a data centre, or a retail outlet enables more precise energy management and targeted support.

4. What challenges do you think we might face in trying to increase visibility? What considerations need to be given to data privacy or cybersecurity? How could increasing visibility create more opportunities for consumers, participants and innovators?

Improving data visibility brings significant opportunities but also challenges. Data privacy and cybersecurity must be at the core of any approach—every data architecture needs strong protections to maintain consumer trust. While EDBs often have plenty of data, the challenge is turning it into meaningful information, and without standardisation and interoperability, greater visibility can lead to confusion.

There are also human impacts to consider, such as concerns about job security, or declining trust as automation increases.

Security and access to data should be governed by established standards, with proof of compliance and independent oversight required to manage risk effectively. This approach ensures that increased visibility empowers consumers, enables innovation, and helps EDBs and retailers optimise the network—while keeping trust, security, and fairness at the centre of the transition.

5. What work are you planning or doing to increase visibility within the electricity system? Are you aware of any work that contributes to this goal?

Over 30% of New Zealand's EDBs now collaborate using our platform as their digitalisation engine and ecosystem. By working together in this way, these EDBs accelerate progress, avoid duplication, and help drive the development of standardised reporting across the sector. This collective approach directly addresses the visibility gap, ensuring that actionable insights are available for the benefit of all New Zealanders.

6. What challenges do you think we might face in increasing interoperability? What other opportunities do you think greater interoperability will bring?

Integrating legacy systems and diverse data protocols is still a major challenge for interoperability, making it tough to connect and share information across the sector. Achieving alignment on standards and data-sharing frameworks can also be slow, especially without strong leadership and clear incentives.

However, the rapid evolution of AI is starting to change the game. Modern AI tools, especially those designed to interface with legacy systems and support "human-in-the-loop" processes, can dramatically reduce the effort required to join disparate systems and data sources.

7. What work are you planning or doing to increase interoperability within the electricity system? Are you aware of any work that contributes to this goal?

New Zealand's EDBs collaborate on developing and implementing standardised data models and reporting frameworks for LV network information with Hiko. By prioritising interoperability from the outset, we are helping to lay the groundwork for a future where data and insights can flow freely across organisational boundaries, supporting both operational efficiency and consumer empowerment.

8. What challenges do you think we might face in simplification? How could simplifying create more opportunities?

There is a real risk in waiting for the "perfect" solution; delaying action can mean missing the early benefits of digitalisation and falling behind. Adopting a product mindset, where solutions can evolve over time, helps us focus on deeply understanding the problems as they emerge.

9. What work are you planning or doing to increase simplification within the electricity system? Are you aware of any work that contributes to this goal?

EDBs collaborate on the development of the Hiko Use Cases that translate complex LV data into clear, actionable insights for their business. Our approach ensures that information is not only accessible but also easily understood, supporting informed decision-making at all levels.

10. Do you have any other comments on this paper?

We commend the Authority's focus on collaboration, standardisation, and consumer empowerment as key pillars of digitalisation. We note that while some edge cases of data gaps exist, most NZ EDBs already have access to sufficient data; the challenge is converting this data into information and value. Our experience demonstrates that a collaborative, standardised approach—rather than isolated efforts—will deliver the fastest, fairest, and most efficient path to a digitalised electricity future for all New Zealanders.

Written feedback and/or supporting documentation

*We will publish all survey responses on our website alongside your name and organisation (if applicable). Are you happy for the Authority to publish your submission? If you think we shouldn't publish any part of your survey response, please select 'No' and let us know what parts should not be published and why in the box below. **

Yes