

Competition Taskforce
Electricity Authority Te Mana Hiko
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Via email: digitalisation@ea.govt.nz

8 July, 2025

To whom it may concern,

Octopus Energy welcomes the Electricity Authority's consultation on digitalising New Zealand's electricity system. As a technology-led retailer, we broadly support the three digitalisation principles outlined in the paper. Our experience in the UK and other markets demonstrates the consumer and system benefits that can be achieved through effective digitalisation.

Octopus Energy launched Project Mercury, a global alliance to establish universal standards for smart technology device integration. Project Mercury aims to create the "Bluetooth of energy", enabling seamless interoperability among the 200 million smart energy devices expected to be deployed by 2030. Mercury enables devices from different manufacturers to work together, creating the sort of foundation for interconnected smart energy systems envisioned in the consultation paper.

We believe it is important to take a global view of standardisation. Should the industry in New Zealand develop its standards in isolation we will face the need, and cost, to "reconfigure" imported devices to meet this standard. Adopting global standards where possible should be our approach.

Responses to Questions

Q1. What could stop or slow digitalisation of the electricity system? What would make it successful? How far should digitalisation go?

Inconsistent data standards across industry participants could create significant integration challenges and increase costs for market participants seeking to develop innovative solutions. Legacy system constraints may limit the adoption of new technologies, particularly where substantial infrastructure investments have been made in older systems. Regulatory uncertainty around data sharing and privacy requirements could discourage investment in digital solutions, as businesses need

clear frameworks to understand their obligations and opportunities. Limited consumer awareness of digital energy solutions may reduce uptake of beneficial technologies and services, limiting the overall benefits that digitalisation can deliver.

Project Mercury emerged from Octopus Energy's recognition that the potential growth in distributed energy resources requires standardised integration protocols. Clear, consistent regulatory frameworks that provide certainty for investment will enable businesses to commit resources to digitalisation initiatives with confidence in the long-term regulatory environment. Industry wide adoption of common data standards could reduce integration costs and enable innovative solutions to be deployed more rapidly across the sector. Strong consumer protections around data privacy and security are needed to build public trust in digital energy solutions and encourage participation in new services. A coordinated approach between industry participants and regulators will ensure that digitalisation efforts are aligned and mutually reinforcing rather than creating conflicting requirements or duplicated efforts.

Lessons can be learned from the UK's experience in digitising the energy system. The program succeeded primarily through regulatory leadership, with mandatory requirements like Data Best Practice Guidance and Common Information Model adoption. The establishment of "presumed open" data principles and structured industry collaboration through formal working groups helped shift toward greater transparency. The key lesson was that regulatory mandates outperform voluntary adoption for systemic change, and structured collaboration through formal frameworks was important.

Digitalisation should extend across the entire electricity value chain, from generation and transmission to distribution and retail. The focus should be on creating an integrated system that enables real-time data sharing, automated responses to system conditions, and seamless consumer experiences.

Q2. Do you agree with how we have defined 'data' and 'information', especially in the context of making data more visible?

We agree with the definitions provided. However, it's important to note that whilst data visibility is a useful principle, it must be carefully considered and isn't necessarily core to achieving interoperable systems and solutions that benefit consumers. We don't need all data accessible and present for everyone for the development of interoperable systems. Data visibility can be very expensive, and management of data

is complex and potentially controversial. It's a good principle but only needs to go so far as to support the other two principles - interoperability and simplification.

Q3. What data do you think needs to be more visible?

Standardised and fully detailed consumption data should be made visible to enable better comparison tools and switching services. For example, the current EIEP13A data format is only partially useful as it does not allow customers to easily differentiate between usage on the different channels of each register on their meter. Improved access to consumers' personal 30 minute data and the ability to securely share this with third parties would enable consumers to gain a greater understanding of their costs and the options they have to refine their consumption and/or generation. It is important that this is balanced against privacy considerations and implementation costs.

Network capacity and constraint data should be made more visible to enable better coordination of distributed energy resources and more efficient market operation. This includes both current network conditions and forward-looking capacity information. To optimize flexibility services effectively, we need standardized dynamic data as our foundation. A key lesson from the UK's flexibility uptake experience was that non-conformity across networks creates significant barriers to progress.

ICP data on the Registry could also be improved:

- Cleaner address data would help consumers identify their correct ICP and reduce the risk of incorrect comparisons and switching the wrong ICP.
- Better information around generation capacity, inverter size, network export limits, etc would help participants offer more tailored solutions to consumers.
- Flagging whether the ICP has the capability/availability for control/DER on the Registry would better enable consumers to participate in the market and take advantage of potential cost savings.

Q4. 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?

Enhanced competition through better access to market information will enable new entrants to compete more effectively and develop innovative solutions that benefit consumers.

This innovation will largely be enabled by better access to real-time data and improved ability to coordinate resources across the system. Improved system efficiency will enable more targeted investments and more effective utilisation of existing infrastructure. This will allow more personalised energy solutions for consumers as retailers and service providers gain better understanding of individual usage patterns and preferences.

Challenges include balancing transparency with commercial and customer sensitivity. This will require careful consideration of what data can be shared publicly versus what needs to remain confidential to protect legitimate business interests and customers. Ensuring robust security frameworks as data sharing increases will be critical to maintaining system security and public trust in digital energy solutions.

Managing the technical complexity of integrating diverse data sources may require significant coordination and potentially investment from industry participants. Clear data governance frameworks with defined access rights will help ensure that data is only used for legitimate purposes and that consumers understand how their information is being utilised.

We believe that overcoming these privacy and cybersecurity considerations would be best led by MBIE as part of the Consumer Data Right (CDR) work - with the Electricity Authority and other electricity industry participants providing input throughout the process.

Q5. 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?

Octopus provides intuitive digital interfaces by developing clear, user-friendly mobile and web applications that make energy management accessible to all consumers regardless of their technical expertise. We use plain English communications in all our consumer interactions, avoiding technical jargon and explaining complex concepts in terms that are easy to understand.

Recognising that many customers struggle to visualise the potential benefits of time-of-use tariffs, we developed this interactive online platform that allows customers to:

- Enter their address or ICP number and current electricity usage patterns
- Use intuitive sliders to simulate shifting energy usage between Peak, Off-Peak, and Night periods
- See immediate cost impacts of these adjustments
- Benchmark their adjusted usage against the average time-of-use split for other Octopus customers in their area

OctoShift helps illustrate the value of load-shifting. This helps customers understand how simple behavioural changes, such as running appliances during Off-peak periods or charging EVs overnight, can significantly reduce their bills while contributing to a more balanced and efficient energy grid.

We are also aware of initiatives by network companies to improve visibility of network constraints and capacity, which we support as essential for effective demand response and DER integration.

Additionally, the CDR aims to make consumer data more visible, accessible, and in a way that respects and protects consumer privacy.

Q6. What challenges do you think we might face in increasing interoperability? What other opportunities do you think greater interoperability will bring?

Some challenges could include different players having different interpretations of technical approaches and implementation priorities. Managing the transition period as legacy systems are upgraded will be complex. Ensuring standards are future-proof and adaptable to new technologies is important given the rapid pace of technological change in the energy sector. Access to metering data has been problematic and may require regulatory intervention to ensure data service providers receive fair compensation whilst preventing consumers from being overcharged. Additionally, balancing standardisation with innovation and competitive differentiation will require careful consideration to ensure that common standards do not stifle beneficial innovation or reduce healthy competition.

However, there are many opportunities with increasing interoperability. Reduced integration costs will lower barriers to entry and encourage innovation by making it

easier and cheaper for new companies to participate in the electricity market. Faster deployment of innovative energy services will be possible when systems can communicate more easily with each other, reducing development time and increasing the pace of beneficial innovation.

Enhanced consumer switching and service bundling will become feasible when different systems can exchange information seamlessly, giving consumers more choice and flexibility. More effective coordination of demand response resources will be enabled by better communication between different systems and market participants.

Q7. 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?

We believe market-driven solutions like Project Mercury are more effective than regulatory mandates. Working with the market to develop standards, rather than just telling the market what to do, leads to better outcomes and faster adoption.

Project Mercury does not aim to limit functionality or innovation with its defined standards, rather it aims to guarantee that certified products will at least provide a defined set of functions, and perform those functions the same way with the same input.

Q8. What challenges do you think we might face in simplification? How could simplifying create more opportunities?

It's important to distinguish between simplification and accessibility. Simple for one person is not necessarily simple for everyone else. Some market participants will be able to use all available information and functionality, while others need simpler interfaces. Simplification should focus on making systems more accessible rather than reducing capability. Simplification often results in the loss of information or functionality, but it should focus on creating layers of access - providing simple interfaces for basic users while maintaining full functionality for sophisticated users.

We must be cautious about simplifying at the expense of capability. For example, customers who want time-of-use pricing schemes need access to that complexity, even as we provide simpler options for others. Simplifying (especially simplifying at the wrong place in a system) at the expense of capability can result in a more

reductive energy system and less innovation, because there is less data/information available.

More effective demand response and energy efficiency programs will be possible when consumers can easily understand and participate in these initiatives without requiring extensive technical knowledge. Enhanced competition will result as consumers become more able to easily compare offerings and make informed choices about their energy services.

Q9. 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?

We recognise that it can be challenging for consumers to determine the best plan for themselves. So, several times each year we “Right Plan” all our customers - analysing their last 12 months of usage. Where we identify savings, we communicate this to the customer and move them to the better plan.

Intelligent Octopus also simplifies optimisation for consumers. We let the consumer define what outcome they need and behind the scenes we manage the complexities of scheduling their usage optimally against their rates.

We also have worked with Orion, Wellington Electricity and Vector networks on flexibility services, such as Resi-flex which includes hot water control, EV fleet management and any other residential level flexibility services.

We are also proposing simple data improvements to the EA. For example, we have recently put in a code change proposal to improve the existing operation of the Electricity registry to respond with the propagation of hot water DLC. The proposed change makes identification of DLC capable meters easier for all participants, and ensures that participants are reliably and accurately able to provide consumers with the compatibility status of their meter, better enabling participants to offer consumers value.

Q10. Do you have any other comments on this paper?

Octopus Energy New Zealand broadly supports the Authority's digitalisation agenda and looks forward to contributing to its implementation. We believe that effective digitalisation will deliver significant benefits for consumers, support decarbonisation objectives, and create opportunities for innovation in New Zealand's electricity sector.

We note that open banking provides a useful parallel for how standardised data access can drive innovation while protecting consumers. The energy sector could benefit from similar approaches to data rights and API standardisation and believe that the CDR work being led by MBIE will do the same for our market.

It is our view that much of what the Electricity Authority talks about in this paper is sufficiently covered by the CDR, especially on the consumer data side. We feel the Authority, and other industry participants, would be best to focus on supporting and participating in MBIE's development of the CDR. Where the Authority could add the most value outside the CDR is in encouraging the availability of network and constraint data, and improving the accuracy and availability of physical infrastructure/asset information (e.g. better information around installed generation details and the availability of control/DER) for all ICPs within the Registry.

We welcome the opportunity to discuss our submission further and to participate in future workshops and consultation processes.

Kind regards,

