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To: The Electricity Authority
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From: Electricity Engineers' Association of NZ

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Subject: EEA Submission – Discussion Paper – *Our Future is Digital*

OVERVIEW

The Electricity Engineers' Association (EEA) appreciates the opportunity to provide feedback on the Electricity Authority's discussion paper *"Our Future is Digital"*. This work is a critical step toward enabling a smarter, more connected, and consumer-empowered electricity system, one that can support electrification, flexibility, innovation, and resilience.

The EEA represents engineers, asset managers, and technical professionals across the New Zealand electricity supply chain. Our members include electricity distribution businesses, generators, transmission and system operators, retailers, service providers, technology companies, and consulting engineers. We work collectively to promote engineering and operational excellence, support system reliability and safety, and advance innovation that delivers positive outcomes for consumers and the environment.

This submission draws on the technical expertise and practical experience of our members and is informed by ongoing EEA-led or supported initiatives, including FlexTalk, the Streamlining Connections Programme, and the Asset Information and Management Forums. We also contribute to the development of standards through Standards New Zealand and internationally via the IEC and maintain close coordination with counterparts in Australia.

Our key messages include:

- Digitalisation must be system-led and coordinated, with clear roles, interoperability frameworks, and alignment across regulatory and policy bodies.
- Increased visibility of low-voltage networks, DER, and consumer load is critical to support flexibility, planning, and equitable access to emerging energy services.
- Interoperability is essential to scale innovation, reduce integration costs, and support market participation by consumers, aggregators, and new service providers.
- Simplification must be built into system design, ensuring consumers can understand, engage with, and benefit from new digital tools and energy offerings.

- **EEA and our members are actively contributing** to digitalisation through real-world pilots, national forums, technical guideline development, and standards work. This includes upcoming work on a Data Quality Framework and Common Data Model to support interoperability and trusted data sharing.

We thank the Authority for its leadership in shaping a digital electricity future and welcome the opportunity to continue working together to ensure it is efficient, inclusive, secure, and aligned with New Zealand's transition to a low-emissions economy.

Discussion Questions

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

The EEA supports the Electricity Authority's vision for a more digital, data-rich, and consumer-empowering electricity system. Digitalisation is essential to enable a more distributed, flexible, and responsive system that supports consumer participation, electrification, and decarbonisation.

Barriers to digitalisation

Several factors could inhibit or delay progress:

- **Lack of clear roles and coordination:** Without a shared digitalisation roadmap and alignment between regulators, distributors, retailers, and innovators, efforts may become fragmented or duplicative.
- **Data visibility gaps:** Many parts of the distribution network, especially low-voltage networks, still lack adequate monitoring. Poor visibility makes it harder to integrate DER, forecast demand, and manage network constraints effectively.
- **Interoperability and standards:** The absence of common data standards, protocols, and trust frameworks creates barriers to information sharing and slows innovation. Interoperability must be actively designed and governed.
- **Legacy systems and capability gaps:** Many existing systems and IT platforms are not fit-for-purpose for a digitalised future. In some cases, capability or resourcing constraints within industry participants are limiting progress.
- **Workforce and technical capability constraints:** As the electricity system becomes more digital and distributed, there is an urgent need to ensure the workforce, across consumers, trades, asset owners, and system operators, has the skills to install, operate, and maintain smart technologies at scale. A shortage of technically capable people could be a critical bottleneck. The EEA is progressing the establishment of an Infrastructure Skills Body (ISB) to support

workforce development, and this is exactly the type of challenge that must be addressed through coordinated sector-wide investment.

- Consumer complexity and trust: If digital tools are too complex or unclear, consumers may disengage. Equally, if data privacy and security are not well-handled, trust could be eroded.

Factors for success

To support successful digitalisation, the following enablers are critical:

- A system-level strategy: The Authority's digitalisation roadmap should articulate a clear sequence of actions, ownership, and delivery expectations across the sector. This includes coordination with MBIE, EECA, the Commerce Commission, and industry bodies.
- Focus on foundational data: A national push to make core datasets more visible, including network capacity, DER visibility, and consumer load profiles, will unlock value across planning, operations, and innovation.
- Interoperability by design: We support continued development of open, standardised protocols for device-level control, APIs, data exchange, and consumer consent frameworks. EEA is contributing to this through the FlexTalk programme in partnership with EECA and others.
- Incentives and regulation that enable investment: Regulatory frameworks must support investment in digital infrastructure (e.g., advanced metering, LV monitoring, DER coordination platforms), especially for regulated networks.
- Consumer-centred design: Solutions must be easy to understand, respect consumer preferences and rights, and support automation where appropriate. Simplification is not just a feature—it's a prerequisite for scale.
- Workforce investment and support: The sector must actively invest in workforce development and training to build and retain the technical capability needed to deploy and manage smart infrastructure. This includes support for technical education pathways, on-the-job learning, and upskilling in areas such as controls, communications, and cybersecurity.

How far should digitalisation go?

Digitalisation should extend across the electricity system, from generation to behind-the-meter devices, where it delivers net benefits and enables greater system efficiency, flexibility, and consumer empowerment. However, digitalisation should be guided by:

- Purpose over technology: The focus must remain on the outcome's digitalisation enables (e.g., enabling flexible demand, decarbonisation, equity), not just technology deployment.
- Progressive implementation: Prioritise high-impact areas (e.g., LV network visibility, DER coordination) while setting a pathway for broader interoperability and consumer participation.

- **Enabling choice and innovation:** Digitalisation should create space for new business models, services, and community solutions, while protecting consumer rights and ensuring fair access.

In conclusion, digitalisation is a foundational enabler of New Zealand's energy transition. But it will only succeed if it is well-coordinated, supported by a skilled workforce, and focused on delivering long-term value for consumers and the system as a whole. The EEA looks forward to working with the Authority and sector partners to ensure the transition is technically sound, inclusive, and future-ready.

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

The EEA broadly agrees with the Electricity Authority's distinction between data as raw, unprocessed facts and information as structured, meaningful insights derived from that data. This distinction is helpful when considering what needs to be captured, how it should be shared, and who should have access to it.

We particularly support the framing that data visibility must extend beyond raw datasets to include the capability to transform that data into actionable information, for decision-making by consumers, EDBs, system operators, service providers, and planners alike. A well-digitalised system does not just collect more data; it enables value to be unlocked from it through standardisation, interoperability, and effective governance.

However, we also offer a few reflections and suggestions for strengthening this framing:

- **The value chain from data to insight should be emphasised:** While the current definition is technically sound, it may benefit from making clearer that the usefulness of data depends on context, timeliness, quality, and the tools available to interpret it.
- **Operational vs strategic information:** Some data is valuable in real-time (e.g. voltage on a feeder), while other information is used for long-term planning (e.g. asset condition or load growth projections). These differing uses warrant distinct visibility and sharing approaches.
- **Derived information and intellectual property:** In a digitalised future, increasing amounts of value will be derived from how data is interpreted. The Authority should acknowledge the tension between making derived insights visible and protecting the intellectual property of innovators who develop algorithms, forecasting tools, or optimisation services.
- **Equity of access matters:** Making data visible also requires addressing capability differences. Smaller participants (e.g. community energy groups or SMEs) may need tools or platforms to help them convert data into usable information, this supports a more inclusive transition.
- **The transformative potential of artificial intelligence (AI):** AI and advanced analytics will become critical tools in processing data into actionable insights, both for system operators and

consumers. AI has the potential to be a game changer in terms of speed, automation, and decision support. However, the pace of AI advancement is likely to exceed that of regulatory development. The Authority may wish to consider how to build flexibility into its frameworks to respond to the opportunities, and risks, posed by AI-driven services and tools.

In summary, the Authority's framing of data vs information is a solid foundation for further work. EEA supports embedding this distinction in the development of data visibility standards, access rights, and governance frameworks, and looks forward to contributing our members' technical and operational experience to this next phase.

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

The EEA supports the Electricity Authority's goal to increase data visibility as a foundation for a more efficient, flexible, and consumer-centric electricity system. Prioritising the visibility of certain types of data will unlock near-term value and support long-term planning and innovation.

We identify the following categories of data as high-priority for increased visibility:

1. Low Voltage (LV) Network Data:
    a. Real-time or near-real-time operational data (e.g. voltage, current, power quality, and phase imbalance) from feeders and substations.
    b. Network configuration and topology (e.g. location of feeders, phase allocation, connectivity models).
    c. Asset ratings and health for LV transformers and cables.

    Rationale: Many EDBs currently lack sufficient visibility into their LV networks, which limits their ability to integrate distributed energy resources (DER), manage constraints, and deliver flexibility services. Improving LV network visibility is critical for electrification, EV integration, and DER hosting capacity assessments.
2. Distributed Energy Resources (DER) Visibility
    a. Installed DER capacity and location (e.g. rooftop solar, batteries, EV chargers, controllable loads).
    b. Real-time DER performance (e.g. export/import profiles, state of charge for batteries, availability for flexibility).
    c. Forecast DER behaviour (e.g. expected export profiles or charging times).

    Rationale: Increased visibility of DER is essential to enable their participation in demand flexibility markets and ensure efficient network operation. It also supports more accurate forecasting and system planning.

3. Network Capacity and Constraint Data
    a. **Current and forecast hosting capacity** at both HV and LV levels.
    b. **Current and planned constraints** on the network by location and time.
    c. **Planned and committed connections** that may impact capacity.

    Rationale: This information is essential to streamline connections, support flexibility procurement, and facilitate efficient investment by developers, retailers, and aggregators.
4. Consumer Usage and Flexibility Data (with appropriate consent)
    a. **Historic and real-time consumption data** at sufficient granularity (e.g. 30-minute or sub-hourly intervals).
    b. **Flexibility preferences or constraints** where relevant (e.g. opt-in availability for load shifting).

    Rationale: Better access to consumer data, within a clear privacy and consent framework, enables more personalised services, supports switching, and allows aggregators to build consumer-friendly flexibility offerings.
5. Planned outages and maintenance schedules
    a. **Time and location of scheduled outages**, including potential impacts.
    b. **Visibility of upcoming maintenance or infrastructure upgrades** that may create temporary constraints.

    Rationale: Timely access to this information supports operational planning, market efficiency, and enhanced coordination between distributors, retailers, and service providers.
6. Resilience-Related Data

    Data on asset criticality, network exposure, restoration times, and past event performance (e.g. during storms or earthquakes) can enhance both planning and response.

    - Visibility of system vulnerabilities and contingency planning measures is increasingly important as climate-related risks grow.

    Rationale: Data plays a vital role in building and demonstrating system resilience—both in day-to-day reliability and in preparing for, responding to, and learning from extreme events. Improved visibility of resilience-related data can help inform smarter investment, enhance preparedness, and support coordinated emergency response across the sector.

A 'presumed open' approach to foundational datasets, along with clear data access rules and protections, will create a more transparent and level playing field. EEA supports the Authority's proposal to consult on setting visibility requirements for network data and encourages a phased approach that builds on existing initiatives and supports industry capability development.

We look forward to supporting this process through our technical expertise and ongoing work, including initiatives like the EEAs Streamlining Connections Programme, FlexTalk and the EEA Resilience Guide.

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?

The EEA recognises that increasing data visibility is a vital step towards a more efficient, consumer-centric, and flexible electricity system. However, there are a number of important challenges that must be addressed to ensure the process is secure, effective, and equitable.

Key Challenges in Increasing Visibility

1. **Legacy infrastructure and data gaps:** Many electricity distribution networks, particularly at the low-voltage level, lack the monitoring infrastructure or digitisation needed to make operational data visible. Retrofitting visibility comes at a cost and requires clear investment signals or regulatory support.
2. **Data standardisation and interoperability:** Without standard formats and protocols, making data visible across diverse platforms and participants can be inconsistent, inefficient, or even misleading. Lack of coordination may result in duplicated effort or fragmented visibility.
3. **Capability and resource constraints:** Smaller distribution businesses and technology providers may face capability and resourcing limitations, particularly when dealing with large volumes of new data, cybersecurity requirements, or integration with national platforms.
4. **Incentives and regulatory clarity:** Where the value of greater visibility is shared (e.g. between distributors, consumers, aggregators), it may be unclear who should invest in collecting or making the data available. This creates a coordination problem that requires regulatory leadership and potentially cost-recovery pathways.

Privacy and Cybersecurity Considerations

The EEA strongly support a privacy and security first approach to data visibility. Key considerations include:

- **Informed consent and consumer trust:** Consumers must understand what data is being shared, for what purpose, and with whom. Consent mechanisms must be clear, consistent, and easy to use, especially for automated data sharing or delegated authority.
- **Data minimisation and access control:** Only data that is necessary to deliver a service or enable system value should be accessed, and access should be governed by role-based permissions.
- **Cybersecurity-by-design:** As system visibility increases, so does the attack surface. Cybersecurity standards and protections must be integrated into system architecture, including device-level security, authentication protocols, and network segmentation.

- Governance and auditability: Visibility frameworks should include traceability of data use and assurance that access aligns with purpose and authorisation. Independent oversight may be warranted for certain high-trust datasets.

Data Ownership and Access Rights

A fundamental challenge in improving data visibility is resolving questions of data ownership, especially as the electricity system becomes increasingly decentralised and digital.

The EEA believes that:

- Consumers should own and control access to their personal and usage data, with clear rights to share it with third parties of their choosing, subject to strong privacy protections and consent frameworks.
- Distributed energy resource (DER) owners should retain ownership of their device-specific data (e.g. battery state-of-charge, EV charging times), but system-level coordination may require some of this data to be shared, under agreed protocols, to ensure safe and efficient network operation.
- Network operators and regulated entities who collect and curate operational data (e.g. voltage, load, asset health) should be responsible custodians rather than exclusive owners. Where data is collected with public funding or regulatory support, it should generally be made available on a "presumed open" basis, unless there are strong commercial sensitivity, security, or privacy reasons not to.
- Derived data and insights (e.g. forecasts, optimisation algorithms) may justifiably be treated as intellectual property, but should not be used to restrict access to foundational datasets or create barriers to entry for new participants.

Resolving ownership and access questions will require a mix of regulatory clarity, industry-agreed frameworks, and potentially legislative support (e.g. through MBIE's proposed Consumer Data Right). EEA supports efforts to develop transparent, fair, and efficient data governance arrangements that maximise system value and ensure equitable access.

Opportunities from Greater Visibility

When done well, increasing data visibility creates powerful opportunities for:

- Consumers: Greater access to consumption, pricing, and network data allows consumers to make more informed choices, unlock value from their DER, and participate in new flexibility or pricing models.
- Network operators (i.e., EDBs, Transpower): Enhanced visibility, particularly at the LV level, supports better network planning, faster fault detection, and efficient hosting of electrification and decentralised energy.

- Innovators and aggregators: Access to standardised, timely data enables new products and services to emerge, such as dynamic pricing tools, home energy management platforms, or local flexibility markets.
- The system as a whole: Visibility underpins a more dynamic, optimised, and coordinated electricity system, where planning and real-time operations are informed by granular data and actionable insights.

In summary, increasing visibility is both necessary and achievable, but it requires a staged, well-governed approach that builds trust and ensures alignment between participants. The EEA looks forward to working with the Authority and other partners to support a secure, open, and value-driven visibility framework across the electricity system.

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?

The EEA are actively involved in a range of initiatives aimed at improving visibility across the electricity system, particularly within distribution networks and consumer energy resources. These efforts are focused on enabling system optimisation, supporting decarbonisation, and unlocking consumer value. Key examples include:

1. Streamlining Connections Programme: Led by the EEA in partnership with EECA, with the support of industry, this programme is developing nationally consistent technical connection guidelines. One key objective is to improve visibility of network capacity and hosting constraints, particularly at the low-voltage level, to support timely and efficient DER and large load connections. The guidelines encourage distributors to publish geospatial, standardised connection and constraint information.
2. FlexTalk: Advancing Demand Flexibility and Visibility: FlexTalk is a collaborative project involving the EEA, EECA, distributors, retailers, aggregators, and technology providers. It is focused on scaling demand-side flexibility in New Zealand and improving the visibility of flexible load and distributed energy resources (DER).

   Through pilots and technology trials, FlexTalk is:

   - Testing the visibility of sub-hourly load profiles and device states (e.g. hot water cylinders, EV chargers).
   - Exploring the integration of smart device data with distribution and system operator platforms.
   - Supporting the development of open protocols and consent frameworks to safely share flexibility-related data.

3. Resilience and Asset Management Data Initiatives: The EEA is actively supporting initiatives that strengthen asset visibility, resilience, and data quality across the electricity sector. As part of our update to the EEA Resilience Guide, we are incorporating new case studies that demonstrate the value of operational data in preparing for and recovering from extreme events. In addition, the EEA is about to commence development of a new Asset Management Guide, which will reflect evolving good practice in data-driven asset strategies, digital tools, and whole-of-system planning.

   The EEA also leads the Asset Management Forum and Asset Information Forum, which provide national platforms for members to collaborate on improving asset health visibility, condition monitoring, and performance data integration.

   At the EEA Asset Information Forum held on 26 June in Wellington, members identified two priority initiatives for the sector: the development of a Data Quality Framework and a Common Data Model. These are now being scoped for inclusion in the EEA's 2025/26 work programme. This work aims to:

   - Build trust in shared data by establishing consistent definitions of accuracy, completeness, timeliness, and fitness-for-purpose.
   - Enable system integration by aligning data structures, metadata standards, and exchange protocols.
   - Support regulatory and operational alignment by fostering a shared understanding of key datasets (e.g. asset data, DER attributes, network constraints).

   By laying this foundation, the sector can support interoperability, enhance visibility, and empower consumers—aligning closely with the Authority's digitalisation objectives. A sector-endorsed Data Quality Framework and Common Data Model would help reduce transaction costs, streamline coordination, and accelerate innovation reliant on high-quality, machine-readable data.

4. Contributions to National and Regulatory Workstreams: EEA members are also contributing to broader sector efforts that support visibility, including:
   - The Authority's Network Visibility consultation (forthcoming).
   - MBIE's Consumer Data Right and product data standards.
   - EECA's Smart EV Charger programme and Flextalk open protocol pilots.
5. Low Voltage (LV) Network Monitoring and Hosting Capacity Mapping: Many EEA member businesses are progressing initiatives to improve visibility at the low-voltage (LV) level. These include:

- Installation of LV monitoring equipment to support real-time or near-real-time data on voltage, load, and power quality.
- Development of hosting capacity maps to inform DER integration and enable more efficient customer and developer engagement.
- Use of smart meter and substation data analytics to infer network performance trends and emerging constraints.

The EEA is also supporting the ENA's Future Network Forum (FNF), including active participation on the steering group, to help coordinate and scale up these efforts across the distribution sector. This work is helping to define common challenges, share lessons learned, and inform regulatory and investment pathways to improve LV network visibility nationwide.

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

The EEA recognises that interoperability is a cornerstone of a digitalised, flexible, and consumer-empowered electricity system. Enabling devices, platforms, and systems to communicate and operate across organisational and technical boundaries is essential to unlock the full value of digitalisation.

However, achieving system-wide interoperability comes with several challenges that will require coordinated industry and regulatory action.

Key Challenges to Increasing Interoperability

1. Legacy systems and platforms: Many existing operational and IT systems, particularly in the distribution sector, are not built for integration or standardised data exchange. Transitioning to interoperable systems will require investment in digital infrastructure and workforce capability uplift.
2. Lack of common standards and frameworks: The absence of nationally adopted data models, communication protocols, and interface standards means interoperability is often ad hoc and project-specific. This limits scalability and increases transaction costs.
3. Fragmentation and siloed innovation: While positive innovation is occurring across the sector, much of it is bespoke and not aligned with common frameworks—risking vendor lock-in, inefficiency, and missed opportunities for system-level coordination.
4. Data governance, privacy, and trust: Interoperability must be supported by clear rules on data ownership, consent, and role-based access. Without trust frameworks and robust security protocols, consumer confidence and participation may be undermined.

5. Need for regulatory alignment and leadership: Regulatory settings across the Electricity Authority, MBIE, EECA, and the Commerce Commission must be aligned to support common data exchange standards and obligations. A lack of clarity in roles or inconsistent requirements could slow momentum.

Opportunities Enabled by Greater Interoperability

Despite these challenges, greater interoperability offers significant benefits across the electricity system:

- Unlocking DER and demand flexibility: Interoperable platforms allow DER (e.g. solar, batteries, EVs) and demand-responsive devices to be coordinated in real-time across networks and markets, supporting decarbonisation and deferring investment.
- Accelerating innovation and market access: Common standards lower barriers for new entrants and service providers, fostering competition and enabling faster deployment of consumer-centric solutions.
- Enhancing system planning and optimisation: Shared access to standardised data improves forecasting, scenario modelling, and coordinated planning across transmission, distribution, and market operators.
- Improving customer experience and choice: Interoperability supports switching, bundling, and delegation of authority, allowing consumers to more easily interact with and benefit from the electricity system.

EEA's Role in Supporting Interoperability

The EEA is directly supporting greater interoperability through:

- Participation in Standards Development: We represent New Zealand on Standards NZ joint committees (e.g. EL-008, EL-052) and work closely with international bodies such as the International Electrotechnical Commission (IEC) to ensure global alignment with local needs. These standards play a vital role in shaping data models, communication protocols, and cybersecurity expectations across devices and systems.

  Standards also help shape the functionality and performance of the products that consumers and networks ultimately install and use. Active engagement in international standards development, such as ISO and IEC, is an opportunity for New Zealand to have a "foot in the door" early, helping to ensure the products coming into our market are fit-for-purpose and aligned with our system needs.

- Cross-jurisdictional collaboration: We maintain close links with industry and standards bodies in Australia, where work on distributed energy integration, flexibility protocols, and data governance is more mature. We actively share lessons and identify opportunities for trans-Tasman alignment where appropriate.
- National coordination: Through initiatives such as FlexTalk, the Streamlining Connections Programme, and the upcoming Data Quality Framework and Common Data Model, we are working to align technical and operational practices across the sector to support interoperability by design.

The EEA sees interoperability as both a technical and institutional priority, requiring shared standards, open platforms, and strong coordination between industry and regulators. We look forward to continuing to support the Authority's digitalisation roadmap through our national and international contributions.

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?

The EEA is involved in a wide range of activities that support increased interoperability, as outlined in our responses to Questions 5 and 6. This includes the FlexTalk programme, development of a sector-wide Data Quality Framework and Common Data Model, national connection guideline standardisation, and our work with Standards New Zealand, the IEC, and Australian counterparts. These initiatives aim to establish shared protocols, align data structures, and support system-wide coordination across platforms, networks, and consumer technologies.

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

The EEA supports the Authority's focus on simplification as a key enabler of digitalisation. Simplification is essential to increasing consumer participation, improving system usability, and enabling efficient decision-making; however, it is not without its challenges.

Challenges in Simplification

- Balancing simplicity with system complexity: The electricity system is inherently complex. Oversimplification risks omitting important technical or contextual details, which can lead to misunderstandings or suboptimal decisions. The challenge is to simplify interfaces and user experiences without diluting the integrity of the underlying system.

- Multiple audiences and capabilities: Simplified tools and information must serve a wide range of users, from consumers to system operators to innovators. Designing communications, pricing plans, or data formats that are clear, consistent, and useful across this spectrum is inherently difficult.
- Inconsistent terminology and presentation: Across retailers, networks, and service providers, the language, data labels, and visual presentation of information vary widely. This creates confusion and reduces comparability for consumers and third parties. Achieving sector-wide alignment on terminology and display conventions is a key hurdle.
- Legacy systems and processes: Many existing systems were not designed for simplification or automation. Simplifying switching processes, consent flows, or data access interfaces may require significant re-engineering and change management across the sector.
- Regulatory and contractual complexity: Retail contracts, pricing structures, and network charges are often shaped by regulatory obligations. Simplifying consumer-facing experiences may require corresponding simplification in regulatory settings and industry rules.
- Regulatory lag: Technology and market innovation are progressing faster than regulatory frameworks can adapt. Unless agencies like the Electricity Authority, and other relevant government bodies, actively plan for regulatory agility, they risk creating bottlenecks that slow simplification and digital enablement. The sector needs more responsive regulatory mechanisms that can evolve in step with emerging technologies and new consumer models.

Opportunities from Simplification

Despite these challenges, simplification offers considerable upside for consumers, industry participants, and the wider electricity system:

- Empowering consumers: Simplified tools and information (e.g. automated comparison services, smart alerts, visualised usage data) can help consumers understand their options, participate in flexibility offerings, and make more informed energy choices.
- Increasing uptake of smart technologies: Removing friction from device enrolment, app integration, or flexibility participation can accelerate the adoption of EVs, batteries, and energy management platforms, unlocking system benefits.
- Reducing barriers to innovation: Consistent data formats, APIs, and retail switching processes lower the effort required to enter the market or integrate with existing infrastructure—encouraging innovation and competition.

- Improving efficiency across the sector: Standardisation and simplification can streamline interactions between distributors, retailers, aggregators, and consumers—reducing administrative overhead and enabling faster, more accurate processes.
- Building trust and confidence: A more transparent, intuitive system fosters consumer trust and encourages sustained engagement—particularly important as more households are asked to participate in demand-side flexibility and decentralised energy services.

In summary, simplification is not just a consumer experience goal—it is a strategic enabler of a more inclusive, efficient, and adaptable electricity system. The EEA supports the Authority's focus on this area and encourages continued collaboration to identify simplification opportunities in both technical and regulatory domains. We also encourage the Authority and its partner agencies to consider how they can proactively address regulatory lag so that simplification and innovation are not held back by outdated frameworks.

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?

The EEA is actively engaged in a range of initiatives that support simplification, as outlined in responses to earlier questions, particularly Q5 and Q8. Key contributions include:

- Streamlining Connections Programme: Developing nationally consistent and simplified technical connection guidelines for DER and large loads to make the process clearer, more predictable, and more user-friendly for customers and developers.
- FlexTalk Programme: Piloting simplified onboarding processes, delegated authority models, and open protocols that make it easier for consumers and devices to participate in flexibility services without needing to understand technical details.
- Consumer Data and Interoperability Initiatives: Supporting the development of common data models and standardised data formats through our Asset Information Forum to improve consistency and ease of use across the sector.
- Collaboration on product transparency: Through engagement with retailers, networks, and regulators, EEA supports clearer, more consistent presentation of energy products to assist consumer choice and comparison.

These efforts align with the Authority's simplification principle and are aimed at reducing friction, enabling automation, and improving consumer and stakeholder experiences across the system.

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

The EEA welcomes the Authority's "Our Future is Digital" discussion paper and supports the intent to develop a system-wide roadmap for digitalisation. We commend the clear articulation of the three core principles, data visibility, interoperability, and simplification, and agree these are foundational to enabling a more flexible, consumer-centric, and decarbonised electricity system.

We offer the following additional comments:

- **Role clarity and coordination:** The success of digitalisation depends on coordinated action across regulators, industry, and government agencies. We encourage the Authority to work closely with MBIE, EECA, the Commerce Commission, and Standards New Zealand to ensure alignment and avoid duplication. The digital roadmap should clearly define the respective roles of industry and regulators in delivering key outcomes.
- **Standards and governance:** The EEA emphasises the importance of strong technical standards and data governance frameworks to support interoperability, privacy, and innovation. Our ongoing work with Standards New Zealand, the IEC, and Australian partners will support alignment with international best practice.
- **Investment signals and capability building:** Many elements of digitalisation, particularly LV network visibility and DER coordination, will require new investment and skills. We encourage the Authority to consider how regulatory frameworks (e.g. price-quality regulation) and incentive mechanisms can enable and de-risk this transition for networks and service providers.

  We also reiterate the critical importance of capability development across the sector. Without a skilled and adequately resourced workforce, spanning technical, operational, and digital domains, the success of any digital roadmap will be constrained. The Authority, along with other agencies, should consider how it can support or coordinate with broader capability initiatives, such as the Infrastructure Skills Body being progressed by the EEA.

- **Equity and inclusion:** Digitalisation must deliver benefits for all consumers, including those with lower digital literacy, less flexible load, or limited access to technology. Simplification and support mechanisms must be designed to ensure no one is left behind.
- **Value realisation and reporting:** We support the Authority's intent to monitor progress and recommend that the final roadmap includes clear success indicators, delivery milestones, and mechanisms for reporting benefits realisation to build trust and accountability over time.

The EEA and our members look forward to continuing to support the Authority's work in this area and contributing our collective expertise to ensure digitalisation outcomes are technically sound, scalable, and equitable.

Contact

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