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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 – Consultation Paper – *Evolving Multiple Retailing and Switching*

OVERVIEW

The Electricity Engineers' Association (EEA) appreciates the opportunity to comment on the Electricity Authority's consultation paper - *Evolving Multiple Retailing and Switching*. We support initiatives that enhance competition, consumer choice, and system efficiency, provided they are underpinned by a strong technical foundation and operational clarity across the sector.

As the national membership body for electricity distribution engineers and asset managers, our submission focuses on the technical, operational, and systems-level aspects of the proposals that affect distributors, metering providers, and registry data integrity. In addition to technical and systems issues, we also note that these reforms may enable future innovations, such as peer-to-peer trading and community energy models, which have potential to improve energy equity and consumer empowerment, particularly in rural and Māori communities.

General Comments

The proposed shift to enable multiple trading relationships per ICP, particularly split consumption and export trading, is a positive and logical next step for the sector. It will provide more consumer choice and facilitate innovative retail models. However, successful implementation depends on resolving persistent switching process issues, upgrading registry systems, and defining technical standards for participant interactions and data exchange.

We support a phased implementation approach, provided the foundations are technically robust and risks are managed collaboratively. We also welcome further engagement with the Authority on the operationalisation and testing of these changes. We also encourage the Authority to consider how the proposed functionality may support the long-term development of decentralised trading models, including peer-to-peer arrangements that could enable more localised energy sharing and community benefit.

EEA Focus and Scope of Responses

The consultation paper raises a broad range of questions spanning policy, consumer choice, market design, and technical implementation. While we support the overall direction of reform, the EEA's submission is focused on questions that fall within our mandate and area of expertise, specifically, those related to:

- Registry functionality and switching process integrity
- Data interoperability and roles/responsibilities across participants
- Technical implications for distributors, MEPs, and service providers; and
- System testing, staging, and implementation pathways.

Accordingly, the following section provides direct responses to selected questions from the consultation paper that intersect with these technical and operational considerations.

Response to Specific Consultation Questions

Q1: Do you agree with the Authority's vision for consumer mobility?

Yes. The EEA supports the Authority's vision for improved consumer mobility and participation in the electricity market, particularly through innovations such as split consumption and export retailing, which provide a foundation for unlocking more value from distributed energy resources (DERs).

From a systems and engineering perspective, successful realisation of this vision requires:

- Upgrading registry and switching platforms to support clearly demarcated trading relationships, including consumption, export, and potentially additional service-based arrangements
- Introducing application programming interfaces (APIs) and time-aligned registry fields to enable seamless coordination between retailers, distributors, metering providers, and reconciliation agents
- Developing a Switching Implementation Technical Standard, which sets out required sequencing, timeframes, validation rules, and exception-handling procedures to prevent switching errors and customer confusion.

These enablers are essential to deliver a technically viable and scalable system that supports consumer choice while maintaining operational integrity.

Q2: Do you have any comments regarding future stages of multiple trading?

Yes. The EEA agrees that future stages, such as multiple trading relationships by device, by service type, or by time-of-use block, represent exciting opportunities for market innovation. However, these models will introduce substantial operational complexity and require:

- Advanced metering configurations capable of sub-load measurement, device-level attribution, and real-time control
- Well-defined coordination protocols for managing device dispatch priorities, especially where multiple retailers or aggregators may seek to control flexible loads (e.g., EV chargers, batteries, or hot water systems)
- Alignment with emerging interoperability and communications standards, including work underway in AS/NZS standards committees (e.g., EL-054, EL-062) on smart device integration and grid-edge signalling.

These changes will require collaborative planning, proof-of-concept testing, and a structured standards-development process to ensure safe, fair, and technically robust outcomes.

As a further consideration, the EEA notes that future stages of reform could also provide a technical and regulatory foundation for decentralised peer-to-peer (P2P) trading models. Such models may be particularly valuable for rural and lower-income communities, including Māori communities where Marae buildings host large solar PV systems but typically experience low daytime demand. Enabling community-based energy sharing could support energy equity, improve local resilience, and align with broader social and economic objectives. While P2P is not the core focus of this consultation, the Authority may wish to consider it as a potential long-term pathway building on the functionality being introduced.

Q24: Do you have any comments on the preferred and alternative options discussed in the 2019 Issues Paper?

Yes. The 2019 review of switching processes identified several persistent issues that continue to affect consumer experience and operational reliability. These include:

- Delayed or out-of-sequence switch notifications, leading to incorrect billing or service handovers
- Incomplete or conflicting registry data (e.g., metering setup mismatches, rejection loops)
- Lack of clear accountability and dispute resolution mechanisms across multiple participant roles.

While the proposed reforms address these issues conceptually, it is critical that they are resolved in practice before layering on the additional complexity of multiple trading relationships.

We recommend that:

- The Authority prioritise the delivery of a formal technical standard for switching processes, developed in collaboration with distributors, MEPs, and retailers
- A registry change log and verification plan be maintained and transparently shared to demonstrate how each legacy issue is being addressed.

Q25: Do you agree the proposed amendment is preferable to the other options?

Yes. EEA considers the proposed staged amendment, starting with split trading for consumption and generation, the most practical and technically achievable option currently. It delivers immediate consumer value while limiting the initial system complexity.

Other options, such as full decentralised peer-to-peer trading or retail disaggregation at the device level, would require significantly more time, regulatory clarity, and systems integration. In the case of peer-to-peer trading, further policy and system design work would be required to support decentralised value exchange between consumers. While not yet technically mature or widely deployed, these models could eventually complement the proposed reforms by enabling community energy initiatives and more localised trading arrangements, particularly where conventional retailer participation is limited or community self-determination is a priority.

The proposed approach aligns with section 15 of the Act by promoting competition, innovation, and efficiency, but only if foundational system upgrades and switching reforms are completed first.

We caution that the success of this approach relies on resolving long-standing technical and operational issues as prerequisites to implementation. The benefits of this approach are contingent on ensuring that the foundational systems, registry infrastructure, and operational roles are clarified and ready. A premature or loosely coordinated rollout could undermine confidence in switching processes and increase the risk of transactional disputes.

Q26: Do you agree the proposed amendment complies with section 32(1) of the Act?

Yes. From a legal and regulatory perspective, the proposed amendment appears to comply with section 32(1), in that it is consistent with the Authority's statutory objectives.

However, from an implementation standpoint, the full realisation of section 32(1)'s benefits depends on how the amendments are operationalised in practice. This includes:

- Ensuring that registry systems are appropriately upgraded, and data standards reflect the added complexity of multiple trading relationships
- Providing clear obligations and expectations for market participants, metering providers, and distributors, particularly in relation to data accuracy, timing, and dispute handling

- Participant interfaces are supported by technical documentation, robust testing, and fallback procedures
- A sufficient implementation lead time and support structures are provided to mitigate disruption
- Establishing pilot programmes and readiness assessments before broad rollout to minimise unintended outcomes.

Q27: Do you have any comments on the drafting of the proposed amendment?

Yes. While the drafted Code amendments are directionally sound, the EEA recommends greater clarity and specificity in the technical provisions to ensure effective implementation. In particular:

- All relevant registry fields and role definitions should be unambiguously described, including how consumption and export relationships are tagged, reported, and reconciled
- Timeframes and sequencing for updates to the registry should be explicitly defined, including the handling of overlapping or failed switch requests
- The responsibilities of distributors and MEPs need to be clearly articulated, particularly in relation to notification obligations, metering data validation, and exception reporting
- Provisions for reversibility or fallback in the event of failed or contested switching events should be formalised, to prevent customer disruption.

EEA also recommends the Authority conduct technical walkthroughs of the Code drafting with operational stakeholders to validate practical viability and identify edge cases.

Additional Topics for Consideration

1. Implementation Sequencing and Timelines

The EEA encourages the Authority to provide a clearly staged implementation roadmap that reflects:

- Decision dates and regulatory milestones
- Publication of registry and technical specification updates
- Code consultation and approval timelines
- Transition pathways for participant system updates.

Given the magnitude of system integration changes, we recommend:

- A 12–18 month lead time post-decision to allow registry, retailer, MEP, and distributor systems to adapt

- **Defined transition periods and contingency buffers** to accommodate late-joining participants or unexpected integration challenges
- **Milestone-based readiness assessments** prior to full market activation.

2. Stakeholder Engagement and Industry Coordination

Effective coordination across the electricity sector is essential for successful implementation. The EEA recommends the establishment of a formal Industry Implementation Reference Group, to:

- Provide technical input on registry, switching, and interoperability changes
- Assist with scenario testing, pilot programme design, and operational validation
- Support proactive issue resolution during transition.

This group should include representatives from:

- Electricity distribution businesses (EDBs)
- Metering Equipment Providers (MEPs)
- Retailers and aggregators
- Registry and reconciliation system providers
- Standards organisations (e.g. EEA, EL-054, EL-062) and Peak bodies (i.e. ENA, EEA).

The EEA stands ready to support the Authority in forming and contributing to this group.

EEA Technical and Operational Considerations

1. Switching Process Integrity

Switching is the foundational mechanism by which consumers express choice in a competitive electricity market. It must be fast, reliable, and transparent to support confidence in market operation. If switching processes fail, are delayed, or result in inconsistent data between systems, this not only frustrates consumers but also introduces financial and reputational risk to all market participants.

As we move toward a system that enables multiple trading relationships at a single ICP, such as one retailer for consumption and another for export, the switching process becomes inherently more complex. Without resolving existing process weaknesses, such as out-of-sequence notifications, delayed confirmations, or conflicting participant data, these complexities could lead to billing disputes, customer confusion, and operational failures.

This is why we strongly recommend:

- The development of a Switching Implementation Technical Standard to clearly define roles, responsibilities, and required process steps under both simple and multi-retailer switching scenarios
- An industry-wide test cycle to validate the updated process under real-world conditions
- Improvements to registry and communications infrastructure to ensure accurate, timely exchange of switching-related data across all relevant parties.

2. Switching System Technical Requirements

While switching processes define how participants interact, the underlying systems and architecture determine whether those processes can be executed reliably at scale. Currently, registry and switching systems were not designed with concurrent or overlapping trading relationships in mind. Enabling this functionality will require a material uplift in how the systems operate.

In particular:

- Sequencing logic must be updated to handle multiple trading relationships for the same ICP, ensuring no party is assigned control over metering registers or data access prematurely or incorrectly
- Systems must support multi-party workflows, where switching involves coordination between multiple retailers (e.g. one for load, one for export), MEPs, and the distributor
- API access and automation are essential to reduce error rates, support faster switching, and provide visibility into switch status and history
- The registry schema must evolve to capture more granular relationships, such as which participant is responsible for which register or device, over what timeframe.

Without these capabilities, the technical risk associated with switching failures or conflicting updates will grow exponentially as complexity increases. Addressing these requirements early is critical to minimising system and consumer-level disruption.

3. Registry Enhancements and Data Responsibility

The registry serves as the authoritative source of truth for electricity industry roles, metering configurations, and trading relationships. Its accuracy underpins everything from billing and settlement to outage management and consumer engagement.

Introducing multiple concurrent trading relationships requires that the registry:

- Accurately reflect split responsibilities (e.g. one party for consumption, another for generation), with clear time boundaries and metering register linkages
- Allow validation of participant data before commitment, to prevent conflicts such as overlapping responsibilities or invalid register configurations
- Maintain robust auditability and traceability, so participants can verify what changes occurred and why in the event of disputes.

Without these capabilities, registry errors will undermine trust in the market and impose additional operational and compliance burdens on participants who rely on accurate, real-time information. Involving distributors and MEPs in the design and testing of registry enhancements will be essential to delivering a usable, reliable platform.

4. Distributor Systems and Customer Interfaces

Distributors play a critical role in ensuring the safe and reliable delivery of electricity, and they are often the first point of contact during outages or emergencies. Multiple trading relationships introduce new challenges that directly impact the distributor's obligations and performance.

For example:

- Tariff application becomes more complex when different retailers may be responsible for different services or times of day. Errors here can lead to billing disputes or cross-subsidisation
- Communicating planned outages becomes more difficult if there are multiple contact points per ICP. The risk of incomplete or delayed notifications increases, particularly during emergencies
- Distributors are increasingly integrating with DER coordination platforms or flexibility markets, where they need to know which party has control over assets like EV chargers or batteries to ensure safe operation.

These challenges mean that distributors will need to invest in system upgrades, business process redesign, and staff training. This takes time and should be supported through appropriate planning, industry guidance, and early visibility of implementation timelines.

5. Support for Phased Implementation and Technical Pilots

Given the scale and interconnectedness of the changes proposed, EEA strongly supports a phased implementation pathway, underpinned by targeted technical pilot trials. Pilots are vital for reducing risk, identifying edge cases, and allowing iterative improvement before full national deployment.

Effective pilots should:

- Include a range of network and participant types to surface variability in system configurations, process maturity, and customer behaviour
- Focus on metrics such as switch timing, error rates, data synchronisation accuracy, and participant satisfaction
- Be designed collaboratively with operational and technical stakeholders to ensure relevance and replicability.

We also recommend the formation of a formal Implementation Reference Group, with strong representation from EDBs, MEPs, registry service providers, and technical bodies such as the EEA. This group would help coordinate feedback, resolve implementation issues, and ensure alignment between technical design and operational needs.

6. Peer-to-Peer Trading and Community Energy Models

While not a primary focus of the consultation, the EEA notes the emerging interest in peer-to-peer (P2P) trading models and their relevance to longer-term market development. These models would allow consumers and prosumers to trade electricity directly, often enabled by digital platforms or community-based schemes.

Such arrangements may hold particular promise for rural and lower-income areas, including Māori communities, where collective assets such as Marae solar PV systems generate surplus electricity. Community-based P2P trading could support more equitable energy access, alleviate hardship, and strengthen resilience and self-determination.

The EEA encourages the Authority to recognise this opportunity in its broader strategic roadmap and to consider the foundational role that switching reforms, registry enhancements, and multiple trading capabilities could play in enabling future community and P2P trading models.

Conclusion

The EEA supports the overall direction of the Authority's proposals. However, technical and operational readiness must be treated as a precondition for successful implementation. We urge the Authority to

ensure that switching, registry, and participant systems are upgraded in a coordinated and standards-based manner, and that transition is supported through structured engagement and system testing.

The EEA welcomes continued engagement on this topic and stands ready to support the technical work required to realise the benefits of more flexible, consumer-centric trading arrangements.

Contact

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