

Submission

Electricity Authority consultation: Improving information on high-voltage network capacity

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Submission focus

This submission supports the Electricity Authority's high-voltage-first approach. It focuses on the consultation questions and the proposed Part 6 Code amendment.

High-voltage visibility is the foundation for evidence-based flexibility. It is the step that will allow later claims about low-voltage flexibility, household appliances, EV charging, water heating, heat pumps, batteries and other DER to be tested rather than assumed.

The central point is that consumer flexibility benefits cannot be credibly substantiated or evaluated until high-voltage capacity, constraints, planned upgrades, non-network solution opportunities and indicative flexibility value are visible in a standardised and usable form.

Key recommendations

- Proceed with the proposed high-voltage network visibility amendment.
- Ensure published information is standardised, location-specific, machine-readable, regularly updated and supported by methodology and confidence information.
- Require clearer disclosure of non-network solution opportunities, including location, service type, timing, duration, expected frequency, indicative value or price, procurement route and measurement and verification expectations.
- Use the high-voltage framework as the evidence base for future decisions about whether, where and how low-voltage flexibility visibility or consumer-facing flexibility mechanisms should be developed.

Responses to consultation questions

The following responses follow the questions in Appendix B of the consultation paper.

Question	Submission response
Q1. Do you agree with our assessment of the current state of the information and capabilities needed to inform network hosting capacity? If not, please explain why.	Broadly yes. The assessment correctly identifies that high-voltage network topology and power-flow information is generally more mature than low-voltage information. That makes high-voltage the correct first focus. Hosting capacity information must be treated as more than a number: it requires topology, current and forecast load and export capacity, modelling assumptions, methodology, update dates, confidence levels and clear caveats. A key reason to start at high voltage is that this is where the first credible evidence of network constraint, network value and non-network solution opportunity can be established. Without that upstream evidence, later claims about household or small-business flexibility benefits remain speculative.
Q2. Do you agree the issues identified by the Authority are worthy of attention? If not, please explain why.	Yes. Fragmented, infrequent, high-level and hard-to-use information prevents access seekers from making efficient decisions. It also makes it difficult to determine where flexibility could provide real network value. The issue is not only connection efficiency. It is also evidence. If high-voltage constraints, available capacity and non-network opportunities are not published consistently, it is not

	possible to substantiate whether flexibility opportunities exist, where they exist, or whether they could ultimately flow through to domestic consumers.
Q3. Do you agree with our assessment that now is the time to regulate for network visibility? If not, when do you consider would be the right time?	Yes. Now is the right time to regulate for high-voltage visibility. Waiting risks continued inconsistency and delayed development of capability. The Authority should proceed now because high-voltage visibility is the practical foundation for later flexibility-market assessment. It provides the information needed to identify real network constraints before imposing or promoting wider consumer-facing flexibility assumptions.
Q4. Do you agree with our assessment of the outcomes that network visibility supports? If not, why not?	Yes. Network visibility supports better connection decisions, better location selection, more efficient network investment, improved competition, more transparent access and better evidence for non-network solutions. The domestic consumer relevance is indirect but important: consumers should only be asked to participate in, pay for, or rely on flexibility capability where there is evidence that network constraints and flexibility opportunities are real. High-voltage visibility is the first step in producing that evidence.
Q5. Do you consider the proposed amendments to Part 6 of the Code would promote the Authority's statutory objective? If not, why not?	Yes. The proposed Part 6 amendments would promote competition, reliable supply and efficient operation by improving access to network capacity information. They also reduce information asymmetry between distributors and access seekers. The amendments should be seen as enabling evidence-based flexibility. They do not themselves create domestic consumer benefits, but they make it possible to assess whether flexibility can avoid or defer network expenditure and therefore whether later consumer benefits are credible.
Q6. Are there any matters you believe are missing from the proposed Code amendment? Please specify.	The proposed amendment should more clearly require information about the nature of any non-network solution opportunity. Where a distributor indicates it may use alternatives to reinforcement, the published information should identify the relevant circuit or area, constraint type, timing, estimated magnitude, likely service type, expected event duration or frequency, indicative price or value, procurement route, and measurement and verification expectations. This matters because flexibility benefits cannot be evaluated if the information only says that alternatives may be used. Access seekers need enough detail to determine whether a flexibility service could be designed, offered and measured. Domestic consumer implications should be mentioned only as a possible downstream effect once high-voltage opportunity and value are established.
Q7. Is the indicative timeframe for implementing the proposed Code amendment likely to be adequate? If not, please provide information supporting a different timeframe, including identifying cost savings from a later implementation date.	The September 2027 implementation date appears broadly adequate for high-voltage information if technical specifications are developed early and distributors can use common templates or shared platforms. A later date would reduce short-term pressure on some distributors but would also delay the evidence base needed to evaluate non-network solutions and future flexibility opportunities. The better approach is a staged implementation with clear minimum requirements first, followed by refinement.
Q8. What are your views on the proposed approach where detailed information about the data sets captured within the definition of network capacity information would be contained in technical specifications?	This is appropriate. The Code should set the obligation, while technical specifications should define the datasets, formats, methods and quality requirements. The specifications should cover GIS/API formats, data dictionary, update cadence, date stamps, version history, methodology disclosure, confidence levels, constraint categories, capacity caveats, privacy requirements and user guidance. They should also define how non-network opportunity information is to be published so that flexibility value can be evaluated consistently.
Q9. Do you consider that the proposal to develop network visibility specifications in consultation with interested parties would be effective? If not, why not?	Yes, provided consultation includes both distributors and the parties expected to use the information. This should include access seekers, flexibility providers, retailers, aggregators, major connection applicants, consumer representatives and parties with expertise in demand-side response and distributed energy resources. The specifications need to be practical for distributors but also usable by those who will test whether a non-network or flexibility solution can actually be offered.
Q10. Is the proposed timeframe for developing the specifications likely to be sufficient?	Six months may be sufficient for an initial high-voltage specification if work begins promptly and the first version is focused. It should not attempt to solve every future low-voltage issue. A sensible approach would be an initial specification for high-voltage maps and downloadable data, followed by later refinement of non-network opportunity fields, procurement signalling and measurement and verification details.
Q11. Do you agree with the proposal to start with high-voltage network visibility? If not, please share your perspectives on where best to start.	Yes. Starting with high-voltage network visibility is the correct approach. It uses the information distributors are most likely to have and allows capability, methods and standards to be developed before any wider scope is considered. This is also the most defensible route for domestic consumer flexibility. Most consumer-owned flexible appliances connect at low voltage, but the value of using those appliances depends on

	real upstream network need. Without first understanding high-voltage constraints, capacity and non-network value, domestic flexibility benefits cannot be substantiated or evaluated.
Q12. Do you agree with the assumptions the Authority has made? Why/Why not?	Mostly yes. It is reasonable to assume that high-voltage data and modelling capability are more mature than low-voltage capability and that access seekers will use better information to make better decisions. However, the Authority should avoid assuming that high-voltage visibility automatically produces consumer flexibility benefits. High-voltage visibility produces the evidence base. Consumer benefits only follow if real constraints are identified, flexibility opportunities are published, providers can respond, and consumers can access a clear reward pathway.
Q13. Have we correctly identified the benefits of network visibility?	Yes, but the benefits should be framed more clearly as evidence-based benefits. Network visibility can streamline connection decisions, reduce speculative applications, improve network utilisation, support more efficient investment and enable non-network solutions. It can also help test claims about flexibility. This is important because domestic consumers should not face additional product, control or participation costs unless the network need and consumer value pathway are clear.
Q14. Do you have any information that might help quantify the value of these benefits? If so, please provide this information.	No independent quantified evidence is provided in this submission. However, the Authority should require future benefit evaluation to measure: avoided or deferred network reinforcement, reduced connection study costs, reduced speculative applications, number and value of published non-network opportunities, number of contracted flexibility services, and evidence of any value passed through to consumers. This would allow flexibility benefits to be evaluated rather than assumed.
Q15. Have we correctly identified the costs of network visibility?	Yes, in broad terms. Costs include data integration, system upgrades, data storage, modelling, publication tools, quality assurance, staff capability and ongoing updates. Additional costs may include privacy review, cybersecurity, user support, version control, methodology maintenance and the cost of ensuring that published information is not misunderstood as a firm connection offer where it is only indicative.
Q16. Do you have any information that might help quantify the costs? If so, please provide this information.	No independent quantified cost information is provided in this submission. Costs should be reduced through common data standards, shared publication platforms, reusable templates, common APIs, guidance material and collaboration among distributors.
Q17. Have we correctly identified the regulatory overlaps?	Broadly yes. There is overlap with existing Commerce Commission information disclosure requirements, particularly around zone substation information, capacity forecasts, network expenditure and reliability information. However, the proposed Code amendment has a different access purpose. It is not simply performance disclosure. It is intended to give access seekers usable, location-specific information for connection, investment and non-network solution decisions.
Q18. Do you agree with our assessment that there is a net benefit notwithstanding any regulatory overlap? If not, why not?	Yes. Any overlap should be managed, but it should not prevent the proposed amendment. The net benefit comes from more granular, timely, standardised and accessible information that can be used to assess network capacity and potential non-network solutions.
Q19. Do you have any information that might help quantify the costs and benefits associated with the regulatory overlap? If so, please provide this information.	No independent quantification is provided. The Authority should minimise duplicated reporting by aligning Code requirements with existing information disclosure obligations where possible. A common data pipeline should be used so the same underlying data can support regulatory disclosure, network planning and access-seeker information needs.
Q20. Do you agree that the Authority should consider reducing the regulatory overlap as the proposed specifications are developed?	Yes. Regulatory overlap should be reduced through common definitions, common reporting structures, consistent data fields and shared publication systems. However, reducing overlap should not remove information that is needed for access seekers to understand location-specific capacity, constraints and potential non-network opportunities.
Q21. Do you agree with our assessment that there will be net benefit from the proposed amendments? If not, why not?	Yes, provided the published information is usable, comparable, machine-readable, regularly updated and linked to clear non-network opportunity signals. Net benefit is strongest where high-voltage visibility allows constraints and flexibility value to be identified before broader consumer-facing flexibility claims are made. If the information is static, inconsistent or heavily caveated, the benefit will be weaker.
Q22. Do you agree the proposed amendment is preferable to the other options? If you disagree, please explain your preferred option in terms consistent with the Authority's statutory objective in section 15 of the Electricity Industry Act 2010.	Yes. The phased high-voltage-first approach is preferable to the status quo, guidance-only approaches, or attempting full high-voltage and low-voltage visibility immediately. The preferred option is proportionate. It starts where data is most available, creates a common evidence base, and avoids making premature assumptions about low-voltage or domestic appliance flexibility benefits before upstream network need has been established.

Q23. Do you agree the Authority's proposed amendments comply with section 32 of the Electricity Industry Act?	On the information provided in the consultation paper, yes. The proposed amendments appear to support competition, reliable supply and efficient operation by improving access to distribution-network information. They are also consistent with the long-term benefit of consumers because they help test whether investment, connection and flexibility decisions are efficient and evidence-based.
Q24. Do you have any comments on the drafting of the proposed amendment?	The drafting should be strengthened to ensure the published information distinguishes load capacity, export capacity, thermal constraints, voltage constraints, security constraints, protection limits, minimum and maximum available capacity, planned upgrades or downgrades, methodology, confidence level, date of assessment and update history. For alternatives to network reinforcement, the drafting or specifications should require a standardised statement of service type, location, quantity, timing, duration, expected frequency, indicative price or value, procurement route and measurement and verification expectations. Where high-voltage constraints are expected to be addressed partly through downstream flexibility, the distributor should state the assumptions and data limitations. This is necessary so domestic consumer flexibility benefits are not overstated before they can be measured.
Please indicate if you wish to be consulted during the development of the technical specifications supporting the proposed Code amendment.	Yes. We would welcome the opportunity to be consulted during development of the technical specifications, particularly on the practical publication of non-network opportunity information, flexibility-value signalling, and how high-voltage visibility can provide a defensible evidence base for later assessment of consumer flexibility opportunities.

Closing position

The proposed amendment should be supported because it addresses the first information gap that must be solved: high-voltage network capacity visibility.

That information is necessary for connection decisions, network investment decisions and the evaluation of non-network solutions. It is also necessary before domestic consumer flexibility benefits can be credibly claimed, costed or relied on.

The Authority should therefore proceed with the high-voltage-first amendment, strengthen the technical specifications, and ensure that any future consumer-flexibility claims are grounded in transparent, measurable and location-specific high-voltage network need.