

20 August 2024

Electricity Authority

To: fsr@ea.govt.nz

Proposal Documents Addressing: Harmonics, Voltage, and Frequency

Utilities Disputes Limited | Tautohetohe Whaipainga (UDL) welcomes the opportunity to comment on the three documents issued on 25 June 2024 addressing harmonics, voltage and frequency.

UDL supports the consideration of these issues and the exploration of the differing roles the consumer, product manufacturers, generating stations, distributors, and network companies might have in addressing them. We are also aware of the developing power quality issues that can be caused by low/high voltage and harmonics, and note this as an area of growing concern.¹

UDL's submission is brief focusing on its consumer role in the electricity industry. The submission makes some practical observations concerning the complaint handling of these types of issues. It makes these observations as the papers suggest that maintaining the health of the network at its current levels may be a challenge.

UDL – Consumer Complaints

UDL operates the mandated industry dispute resolution scheme.² Its core purpose is to ensure that any person who has a complaint about a retailer or distributor has access to a scheme for resolving a complaint.³

This purpose brings with it an educative function, both in promoting the resolution scheme and often being the first point of contact for consumers. Consumers raise with UDL a range of issues such as concerns about: customer service, their pricing plan, billing information, outages, trees near lines, medical dependence on electricity, and metering.

UDL is well equipped to consider these issues considering its role in recommending a fair and reasonable outcome, after considering general principles of good industry practice and guidelines, and any legal rule or judicial authority.⁴ The Electricity Industry Participation Code 2010 (EIPC 2010) forms part of these considerations. It is often cited in recommendations to the parties about how their complaint may be resolved.

¹ See the description of the effect excessive harmonics can have: EA, *The Governance and Management of Harmonics in New Zealand's Power System*, 25 June 2024, 9.

² See Electricity Industry Act 2010 s 95.

³ See *Ibid.* sch 4, clause 1(a) and (b).

⁴ Energy Scheme Rules, rule 24.

UDL also analyses the complaints it receives to discover trends, and to identify systematic issues. UDL in its neutral role works hard to establish good relationships with the community, retailers, distributors, and the EA.

UDL – Complaints

The changing market the EA identifies in terms of solar energy is being seen in the complaints sector. UDL has also begun to receive inquiries about the functioning of certain products such as EV chargers. As the market changes this is reflected in the types of complaints made.

Consumers are therefore working through new issues as they affect them, without perhaps realising some of the underlying causes and/or the operational requirements of new products. Retailers and distributors, with the assistance of UDL, have the task of making inquiries, explaining what has taken place, and where appropriate offering a remedy.

UDL, in its role as the industry resolution scheme provider notes with concern comments in the papers that preventing a deterioration in the network will be a challenge: “In particular, we expect that co-ordinating the real-time operation of New Zealand’s power system to supply electricity to consumers at the level of reliability they want will become more difficult over the coming years.”⁵ Supply issues are already a feature of UDL’s work. In the past two years we have processed about 517 complaints and queries about outages.

The Role of the EA

UDL acknowledges the important statutory role of the EA in oversight of electricity supply: “The main objective of the Authority is to promote competition in, *reliable supply* by, and the efficient operation of, the electricity industry for the *long-term benefit of consumers*.”⁶ The EA may also include provisions in the EIPC 2010 which are necessary or desirable to promote this objective.⁷ The issuing of these documents is an obvious and welcome response to fulfilling this objective, and any decisions placing an onus on the consumer will need to be evaluated against this statutory required viewpoint.⁸

⁵ EA, *Addressing Large Voltage Deviations*, 25 June 2024, 3.

⁶ Electricity Industry Act 2010, s 15 (1) (emphasis not in the original).

⁷ See *Ibid.*, s 32.

⁸ While noting the EA is not the only regulator that regulates the electricity industry and other regulators also have impact on power quality and reliability. For instance, other regulators such as Energy Efficiency and Conservation Authority (appliance standards), WorkSafe (statutory voltage and harmonics), and the Commerce Commission (see part 4 of the Commerce Act 1986), all maintain requirements that directly impact on consumer power quality and reliability.

General Points

The EA's additional objective is: "...to protect the interests of domestic consumers and small business consumers in relation to the supply of electricity to those consumers."⁹ This additional objective is focused, in the words of the statute, on the *dealings* of industry participants with these consumers.¹⁰

UDL in its role as the provider of the industry dispute resolution scheme has a unique viewpoint to offer on what fosters a good consumer relationship with industry participants such as distributors and retailers. Therefore, UDL in its current role of considering complaints about quality of supply issues offers below some general observations.

The EA, retailers, and distributors can appropriate these points as they wish as background or to take them further in their related but distinct roles of guaranteeing or promoting the reliable supply of electricity.

- a) Communication – If the industry wishes to demand more of the consumer, it should be clearly communicated and highlighted not just in terms and conditions, but through consumer education. Such education should include the difficulties (and positives) of many of the issues set out in these papers outlining the difficulties with inverter-based intermittent generation resources such as wind and solar, inverter or rectifier-based consumer appliances such as EV chargers and heat pumps, and their combined effect on the network. The effect of these distributed energy resources, together with flexibility requirements contracted with consumers may lead to changes in the types of complaints received and require changes in complaint analysis.
- b) Training – Some retailers and distributors show a healthy ability to think like a consumer, while representing the views of the business they represent. While for others the response can be uneven. Professional training in complaint handling can assist an organisation to reach standards that can maintain good will, even when a consumer may not receive the resolution they wish.
- c) Consumer Resilience - The consumer is asked to accept limitations of the New Zealand network:

*The evidence establishes that electricity distribution in New Zealand has certain characteristics which the consumer must be taken to know. They are: supply through overhead lines and/or supply that is dependent on a single circuit; planned outages for some maintenance; unplanned outages or voltage fluctuations related to fair wear and tear, environmental hazards such as birds, possums, contact with vegetation, storms, or excessive consumer loads; instability after outages; and third party damage.*¹¹

Making increased demands of consumers in terms of supply capacity and power quality may strain their resilience to accept the limitations of the network. Increased difficulties in supply will have to be carefully thought through in terms of what is acceptable having regard to the legal test of the ordinary consumer (see 7A of the Consumer Guarantees Act 2010 (CGA)).

- d) Quality of Supply Guarantee – The understanding of the operation of s 7A of the CGA is uneven. Some outages can be analysed easily while others require further review. Sometimes retailers and distributors focus almost exclusively on the actions of the consumer in terms of insurance and surge protection. However, while this can be determinative an analysis of the outage of itself may shift

⁹ Electricity Industry Act 2010, s 15 (2).

¹⁰ *Ibid.*, s 15 (3).

¹¹ *Contact Energy Ltd v Jones* HC, CIV 2007-485-2761 [24 April 2009], para 97.

responsibility back to the distributor and retailer when industry and/or legal standards have not been met.¹²

- e) Small Businesses – That businesses may fall under the CGA could be understood better, and the CGA opting out provision also appears to require further industry reflection (see s 43 of the CGA).

That a complaint may be made even when a business falls outside the CGA, requires increased recognition. In such complaints it is important to review the outage in terms of any terms and conditions, judicial authority, and industry guidelines and practice.

- f) Consumer Focus - The CGA quality of supply guarantee is against the retailer. The retailer being the point of contact for the consumer. However, it is the distributor that often will have the required information and may be responsible for the outage. It is essential that there is a good working relationship between the retailer and distributor to resolve these complaints.¹³ The wording of s 7A of the CGA is to assist the consumer, it is unfortunate when in some cases it appears to become an obstacle to efficient resolution of a complaint.
- g) Responding to the Consumer – If it is expected there will be a deterioration in the network, those in the industry may need to expand their toolbox of remedies. While there may not be a legal breach, consumers are more likely to respond well to some acknowledgement that outages have exceeded acceptable industry practice or the self-imposed standard of the distributor. It is over to retailers and distributors to consider such payments in terms of their business model, and evaluate their effect in terms of good will, efficiency, and maintaining consumer confidence.¹⁴

UDL offers these modest and practical observations at this stage of the consultation. It looks forward to continuing to work with the EA, retailers, and distributors as measures are taken to maintain security of supply while the New Zealand network evolves as inverter-based generation increases.¹⁵

[REDACTED]

Yours sincerely



Neil Mallon
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¹² UDL encourages a close reading of the cases in this area such as: *Contact Energy Ltd v Jones* and *Contact v Moreau*, CIV 2017-485-962 [2018] NZHC 2884.

¹³ The CGA has an indemnity provision for a retailer to claim compensation where the distributor may be responsible, see 46A of the CGA.

¹⁴ See for example Vector, *Residential Service Standards Brochure*, <https://www.vector.co.nz/personal/electricity/about-our-network/our-service-standards>; and Aurora Energy, *2021 Aurora Energy Customer Charter*, <https://www.auroraenergy.co.nz/who-we-are/our-customers>.

¹⁵ EA, *Addressing Large Voltage Deviations*, 25 June 2024, 2.1-2.4.