



Vector Limited
110 Carlton Gore Road
PO Box 99882
Newmarket
Auckland 1149
+64 9 978 7788 / vector.co.nz

29 November 2024

Chris Otton, Manager – Manager Policy – Operations, Electricity Authority
chris.otton@ea.govt.nz

CC:
Market Policy – Operations, Electricity Authority
OperationsConsult@ea.govt.nz

Kia ora Chris,

Feedback on updates to scarcity pricing settings

Thank you very much for the opportunity to provide feedback on the *Update to scarcity pricing settings* consultation paper (the consultation paper)¹. We would welcome the opportunity to discuss this with you and the team at the Electricity Authority (Authority) and believe the industry would benefit from further dialogue in this area.

We have restricted our feedback to commenting on one piece of the Authority's framing in the consultation paper:

While controllable load is a useful tool for managing periods of tight supply, we want to see this controllable load shift from distributors to retailers and be signalled in the wholesale market.

While we acknowledge this is consistent with signalling the Authority has given for some time, we have yet to see any evidence or a clear problem definition that supports this statement. For example, several distributors, including Vector, already offer their manageable load into the reserves market, therefore its value is already signalled in the wholesale market. We understand that this service is not currently possible with the new meter-based technology retailers are using.

We have raised many times with the Authority that there is a gap in the regulatory framework requiring parties managing load on EDBs' networks, regardless of whether they are offering services to EDBs, to follow 'good electricity industry practice'. At a minimum, expectations on these parties need to include that they enter into and comply with a load management protocol with their

¹ Available online at <https://www.ea.govt.nz/projects/all/pricing-in-a-renewables-based-electricity-system/consultation/update-to-scarcity-pricing-settings/>

host EDB(s) (noted in point 4 below), and that they operate these distributed resources in ways aligned with the long-term benefit of all consumers (noted in point 2 below). Both these things are absent from the Code, currently.

We are concerned that the Authority is effectively allowing parties to manage devices on EDBs' networks without appropriately ensuring that those parties do so responsibly and are aware of their liabilities should they take actions that impose costs (e.g. damage) on others. An example of this is the Authority's recent DDA decision requiring EDBs to refund consumers' lines charges in certain instances, regardless of whether the outage has actually been caused by a party managing devices on the EDB's network in an irresponsible manner². There are no repercussions for such actions. This appears to be a significant oversight, albeit one the Authority is well aware of. If the Authority is to pursue a shift away from distributor-led load management, it must ensure the appropriate settings are in place to ensure consumers' interests (including, and especially those who do not own manageable resources) are protected.

1. Emergency orchestration is complex and requires critical coordination

We need to ensure that any available distributed resources are used to their maximum extent in a national (grid) emergency, but how those resources are used needs to be coordinated by, and through, the distributor on whose network the resources are operating. Failure to do so has the potential to create, or exacerbate, local emergencies.

This is less of a concern for how dispatchable load is turned *off* in a grid emergency, and more to do with how load is *restored following* a period of control. Neither the System Operator, nor retailers, have any visibility of what rate of load restoration can be accommodated on local networks following a grid emergency. It is simply not the case that all resources turned off for a period of an hour or more can safely be turned on again at the same time, at the conclusion of a grid emergency. We refer to this as “the forgotten side of load management”³. The same applies to the injection from batteries to alleviate a grid emergency – it is critical that this is limited to what can be contained within the thermal limits of network infrastructure, to avoid risks to public safety, outages, consumer assets or network assets.

As we have discussed in submissions in relation to the Load Management Protocol, it needs to be clear that EDBs must have the ability to coordinate response of distributed assets to grid emergencies, and will also need the ability to manage Network Emergency Events on their networks. This coordination must trump any other arrangements in place – in a similar vein to how grid emergency arrangements give Transpower the power to orchestrate response by grid assets to emergencies when other mechanisms have failed, to avoid more widespread issues.

² Clause 9.10

https://www.ea.govt.nz/documents/5926/Changes_to_the_DDA_templates_and_Part_12A_clauses_-_Decision_paper.pdf

³ We published a post on this topic here: <https://www.esig.energy/the-forgotten-side-of-load-management/>

2. Increase of commercial flexibility services highlights gap in trading conduct rules

We are now seeing a number of retailers on our network develop capability and products for managing consumers' hot-water and electric vehicle-charging loads. All these are positive developments in the demand-response market, building depth in the market, creating choice for consumers and helping minimise whole-system costs.

However, we have an emerging concern with these new demand-response arrangements – how do we ensure these flexibility resources are used in ways that provide long-term benefits to consumers?

We are surprised that no questions have been asked about the wisdom (and risks to market outcomes) of having the same parties controlling both demand and supply in the price-formation process. More demand-response by non-generators must be a positive for competition in the wholesale market, as these resources are substitutable with generation. But how do we know the gentailers (or any other retailer who is well-hedged) will actually drop their customers' hot-water and EV-charging loads in periods of high spot prices, if they themselves are net long in the market and would actually benefit from the high prices? We have similar concerns relating to the on-call demand response of grid-connected resources. What assurance do we have that Meridian will call for Tiwai to reduce demand at the optimal time for the system, especially if Meridian's own reservoirs are relatively well-stocked?

These questions highlight to us that there are currently no provisions in the Code to ensure unoffered demand-response resources are used in ways that are ultimately in the long-term interests of consumers. Their use is neither transparent nor monitored, especially for those resources not separately metered. The Code provisions in Part 13.5A, requiring all market offers to be made consistent with no participant being able to exercise significant market power (i.e. offers must not be made in a way that has a net adverse impact on economic efficiency), appear only to cover use of resources officially offered to the market. There are no parallel provisions for unoffered resources, or activation of demand-response contracts.

There is no reason why the use of demand response (or virtual power plants) by market participants should not also be governed, revealed, monitored and reported in the same way as offered resources. The terms of any party's demand response agreements (and wider use of aggregated DER) could be considered analogous to a form of generation that is activated to reduce net demand on the system. Any *generation* of this scale, if activated, would be required under Part 13 to be offered, and would therefore be subject to the offering rules in Part 13.5A. We also assume that, at these scales, requirements for information disclosure should also apply.

We are happy to work with the Authority team to develop a Code amendment proposal to address these issues.

3. Linkage to DDA-governed access rights and operational coordination is unclear

Access rights to flexibility resources are already managed through the DDA as a distribution service, in clauses 5.1-5.3. Clause 5.1 sets out how an EDB may acquire the rights to manage a consumer's flexibility resources directly, which then gives them the ability to self-supply a flexibility resource. Clause 5.2 sets out how a retailer may acquire the rights to manage a consumer's flexibility resource, which they could then bundle with other resources to provide a service to EDBs themselves, and/or to value stack for other forms of revenue. We are unclear how the Authority's position aligns with these precedents in the Code.

Relatedly, clause 5.6 of the DDA requires that a flex-trading retailer enters a load management protocol with its host EDB, including confirming how their actions will be coordinated with those of the EDB in system emergencies. As mentioned in 4 below, this is an avenue Vector and other EDBs are pursuing. Is there anything about that process that needs to be reconsidered in light of the Authority's position?

4. Robust load-management protocols a fundamental part of distributed flexibility management

As noted above, parties operating DER on EDBs' networks must be compelled to enter load management protocols with their hosts, regardless of whether they are actually providing their hosts any flexibility services. This applies to both retailers and non-retailers – in other words, any party managing distributed resources – especially if they are operating them in the wholesale market. In particular, response by distributed resources to scarcity prices, one of the key focuses of the consultation paper, must be carefully coordinated by and with host distributors.

We have submitted several times to the Authority that EDBs need to be empowered to direct the response to emergency situations by the aggregators on their networks – from widespread grid emergencies to local, LV issues (e.g. car versus pole) and imminent interruptions that can be avoided. Ensuring the lights remain on, taking steps to avoid cascade or widespread failure and restoring services if they do are, at the very heart of the distribution services an EDB provides to customers (and retailers). These powers are akin to the System Operator's ability under the Code to manage grid emergencies.

In order to maintain quality and reliability while building more efficient networks, EDBs need the power to *avoid* emergencies (referencing DDA cl 5.6 and expressed as "imminent" interruptions in the definition of System Emergency Event) by ensuring distribution-level constraints (physical and power quality) are understood and adhered to by parties managing DER on distribution networks (DER Managers). This needs:

- A mandatory, 24/7 operating envelope at each ICP, that must be adhered to by DER Managers
- DER Managers to ensure offers into wholesale markets, and any other actions, stay within their operating envelopes

As we have previously submitted, enabling Code is the first-best solution for these things, and should be expedited. In its absence, we and other EDBs are attempting to formalise the points above in a 'load management protocol' with retailer DER Managers, as per DDA cl 5.6. Our engagement with leading retailers to date has been constructive and positive.

However, no such mechanism exists to enable safe operation by non-retailer aggregators (not currently industry participants to whom the Code applies) on our networks (and there is no indication that this is expected 'good electricity industry practice').

This should not be considered an attempt by distributors to block new entrants or restrict consumer choice in who manages their load – far from it. Ensuring such protocols are in place will enhance the market, provide a level playing-field between all participants, build trust between participants, EDBs and consumers, and help develop industry capability. It will also enhance network security and reliability that could otherwise be caused by non-retailer aggregators operating on our networks at will or entirely at their own discretion. They are foundational and a key enabler. Pursuing negotiated solutions first, as we are, is appropriate for a nascent market, but some encouragement may be required.

Thank you for considering this feedback. As noted above, we would appreciate further opportunities to engage with you and the team on the development of this guidance.

We look forward to hearing from you.

Ngā mihi

A handwritten signature in blue ink, appearing to read 'J. Tipping'.

James Tipping

GM Market Strategy / Regulation