

Appendix G Format for Submissions

Submitter	Orion Group
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Questions
<p>Q1. Are there other options that you think the Authority should consider?</p> <p>Comment:</p> <p>The Electricity Authority has proposed three options for intervention.</p> <ol style="list-style-type: none">1. Continuation – expand practice note and pricing scorecards.2. Control – amend the code to specify requirements.3. Call-in – amend the Code to review and approve pricing methodologies. <p>A fourth option to consider is “Collaboration”, that looks for the Authority to engage at a technical level to understand “how” EDB’s are quantifying and signalling avoidable costs in their pricing. Collaboration should also be extended to retailers and aggregators (as part of the pricing supply chain), with the goal of developing a consistent approach to pricing that is focussed on positive consumer outcomes.</p>
<p>Q2. Do you have any comments on the options outlined?</p> <p>The Electricity Authority updates and publishes a scorecard for each Electrical Distribution Business (EDB) annually, after the EDB has disclosed its pricing methodologies and roadmaps (typically by 1 April each year).¹</p> <p>On 19 September 2022 the Electricity Authority issued an open letter to EDBs highlighting the main areas for distribution pricing reform.²</p> <p>On 18 October 2022 the Electricity Authority issued an updated distribution pricing practice note. This was followed by a letter issued to EDBs on 21 December 2022 outlining key changes to the scorecard criteria for 2023.</p> <p>Orion has had regular engagement with the Authority since March 2022 and through this process have been able to have meaningful conversations around what the Authority’s expectations are as well as convey any barriers/challenges that Orion have. Therefore, we consider a combination of control and “call in” would be an appropriate way forward. There are benefits to the control option, but we caution against unnecessary regulatory intervention, without thoroughly working through any unintended consequences, as we all work through the challenges of decarbonisation and electrification facing the industry and NZinc as a whole.</p> <p>We would also strongly encourage the Authority to consider a collaborative approach that includes retailers, EDB’s, and the Authority.</p> <p>There is the risk of a compliance burden and limiting innovation (refer paper points 7.35 and 8.26) with the control option, but well-designed amendments would assist distribution networks to have clarity on regulatory intent and design their pricing structures to better serve consumer categories. The options need to allow for exploration of novel distribution pricing (at a small scale) to achieve the desired outcomes in the most efficient way and ensure we do not implement Code changes that limit agility given the pace of change and uncertainty in the future.</p>

¹ <https://www.ea.govt.nz/industry/distribution/distribution-pricing/>

² https://www.ea.govt.nz/documents/2631/Letter-to-EDB's-re-pricing-September-2022_w2bVZa1.pdf

A “call in” approach might be more appropriate in targeted instances to understand the reasoning and context behind a particular distribution company’s principled approach to pricing and to open dialogue.

With the current review of the Input Methodologies and Default Price Path reset, any control options will not be able to be reflected in price paths and revenue allowances determined by the Commission for the 2025-2030 regulatory period.

Q3A. Do you agree that a combination of TOU tariffs and demand control (appliance) tariffs would be useful for the smart management of peak demand?

We partially agree with Question 3A. TOU tariffs would be useful for the smart management of peak demand, but we require further clarification on the definition and full intent of the Authority for demand control (appliance) tariffs. The paper does not provide much explanation.

Generally, we have tended toward being technology agnostic with our pricing. We are comfortable with ‘appliance tariffs’ if this is more directed to customer segmentation e.g., a tariff for public EV charging connections as an example or if ‘appliance tariffs’ refers to payment for flexibility services.

There needs to be a clear distinction between “TOU tariffs”, where all consumers in a customer segment subject to the TOU pricing are incentivised to shift demand and potentially reduce their energy bills, and “demand control” tariffs where a consumer can monetise their technology choices (such as could be meant by an appliance tariff in this paper). We provide some explanations for passive and active tariffs below taken from discussions with ENA and Horizon Networks that may be useful.

“Passive Tariffs” (such as TOU) allow consumers to make informed decisions regarding how much they value access to electricity during certain times. If consumers are not responding to a correctly priced static tariff, then this signals to the EDB that consumers would prefer the investment required³. (that price was signalling) to provide capacity to meet any increase in demand over shifting their demand.

“Active Tariffs” (demand Control) that enable consumers to monetise their technology. This will typically involve active engagement with the consumers, or their representatives (such as flexibility traders) to manage demand and/or generation to meet the identified need. This is effectively a payment for control to manage demand when needed. The value (and payment via pricing) is for access to flexibility, rather than an incentive to shift demand.

Q3B. Do you consider that TOU pricing could have unintended consequences for congestion on the LV network?

We are establishing our TOU windows as optimally as possible to avoid unintended consequences for LV congestion by reviewing LV monitoring data, we currently have in place. However, ultimately TOU pricing is most effective if the signal(s) are passed through to the consumer which then enables the consumer to respond to the signal. The response might also incorporate active “demand management” which could be via a ripple signal or other evolving technology.

There is the possibility of, if distribution pricing signals are not passed through (or aligned) with retailer TOU offerings, unintended consequences for congestion on certain parts of the LV network. Where price signals are not being passed through, consumers are less likely to respond leading to unnecessary augmentation of the network to meet any increase in demand.

³ This investment may be in physical equipment, or in flexibility services.

Of particular concern to EDBs, is Retailer offerings (such as free hours of power) that encourage consumer behaviour that adds significantly to peak period consumption. This could bring forward congestion on parts of the network thereby requiring investment earlier than would have occurred otherwise – at long term cost to consumers. If the sector is to ensure optimum investment from a system point of view the type of collaboration suggested in question 2 could help to avoid these types of scenarios.

Q3C. Do you consider that use of shoulder pricing as part of the TOU price structure could be an effective way to mitigate this risk? What other ways could be effective?

Shoulder pricing, with the right differential to peak or other off-peak prices, can encourage the shifting of demand. Our modelling, as we transition to a more granular level of TOU from the static Day/Night TOU, has informed our design to encourage the shifting of demand to more optimum times and provide customer choice around the price/consumption trade-off.

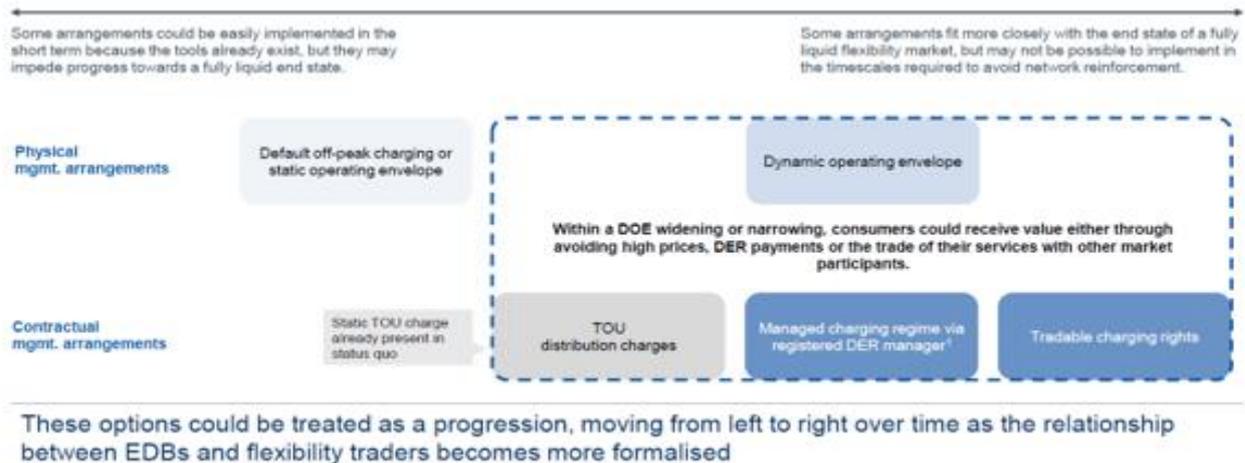
Our planned approach is chosen to enable demand management through tariffs (controllable demand) and standardisation of our pricing structure with other similar TOU structures.

To effectively mitigate the risk of unintended consequences for congestion on the LV networks, this could include limiting eligibility (defining criteria) for TOU pricing that attract certain consumer groups. This could facilitate investment in infrastructure at the right time to support peak demand management provided TOU pricing signals are passed through to the consumer.

Other options to consider:⁴

The NERA report looked at the benefits of alternative ways to mitigate risks and consider some least regret control amendments as the market matures, with some aspects already part of the market design.

Their diagram below demonstrates how tariff structures and demand management tools are intrinsically linked through a combination of static and dynamic options.



Code amendments that clearly define demand management rights for distribution networks (DER) and flexibility for retailers and/or aggregators (VPP) would be beneficial. Further the NERA report showed that value can be achieved by both managed demand and market-based solutions (aggregators and/ or VPP).

⁴ PowerPoint Presentation (vector.co.nz) – page 34

Managed demand ⁵	Market based flexibility
EDB's can manage demand via ripple, future technology and/or demand response protocols i.e., open ADR	Optimising demand across the system over the short-term and creating value to energy storage systems and other technology owners.
Rule based dynamic charging limits that can reflect real-time network conditions.	Long-term commitments may limit the ability to pursue short term opportunities and will thus be part of a portfolio of options to maximise their returns. The benefits are that long-term commitments can help to underwrite investment in DER or capability a necessary part of the overall package.
Demand management allows EDB's certainty to defer investment at all levels of voltage benefiting consumers through lower distribution charges. It may however restrict co-optimisation with other sources of value for flexibility, such as wholesale arbitrage, in some circumstances.	There is the potential for a negative impact if the market targets short-term opportunities, EDB's may be unable to acquire demand reductions at affordable/economical terms to influence long-term planning, which will lead to infrastructure investment.

As demonstrated above, having a suite of tools including both managed demand and TOU tariffs will help address the risk of unintended consequences for congestion on the LV network.

Q4. Do you agree with the assessment of the current situation and context for peak period pricing signals? What if any other significant factors should the Authority be considering?

We submit that we agree somewhat to the assessment. In principle, there is merit to doing a desktop level assessment of the current situation S (4.19), however without understanding the models behind the data, there may be flaws in the assessment, as it solely relies on information that is only available in the public domain. In addition, the analysis takes a point in time view that may not be informative of the journey an EDB is on as signalled by its pricing roadmap e.g., where it has come from, got to and heading towards.

A more useful analysis of the position would be to understand each distributor's cost of supply models (cost allocation approach) as well as forecasting models for pricing. Part of pricing is to signal the most efficient use of the existing network and to reflect the cost of the future network and application of non-network investment. For instance, it will be important to understand;

- each distributor's plans for customer segmentation.
- how the capacity steps might relate to the design standards of the network and the types of customers on that network e.g., an EDB may not currently have customers with an orientation to charge at night.
- the guidance provided in determining customer allocation to one capacity band over another e.g., where a customer is on the cusp of two bands do EDBs assess both bands and determine the better outcome for the customer?

As indicated pricing can take a penalty or reward approach. Within our Major Customer connection category, Orion has control period pricing that dynamically signals, via direct notification to the customer, the cost of using the network at peak times through specified prices. The value is agnostic to the type of technology or service the consumer uses to shift demand or avoid consuming during control periods where the cost is higher to serve. This offers the consumer group the choice of

⁵ PowerPoint Presentation (vector.co.nz) – page 18

switching fuel types or reducing demand which mitigates higher energy bills and supports the network (in effect this could be seen as flexibility / DER in an infantile state).

To appreciate the current state, the Authority should be engaging with EDB's around their cost allocation approaches that feed into their pricing models. Taking the time to understand what goes into a EDB price modelling, including relevant source data, would be most informative and provide an opportunity for specific feedback relevant to the EDB's approach.

Q5. Do you agree with the problem statement for peak period pricing signals?

We agree with the problem statement 4.27.

Flexibility is evolving and maturing over time, both in technology and operational requirements. Orion is running a flexibility trial in Lincoln to address anticipated congestion and defer investment. We have briefed the EA on this and the benefits of this use case to "learn by doing". This trial will help inform the benefits of flexibility at scale on the Orion network.

We disagree with problem statement 4.28. This is a broad statement and doesn't address the intricacies of particular EDBs pricing approaches.

Point 4.28: States "*Where tariffs do send peak price signals, there is little evidence that the strength of the signal (or the price differential between controlled and uncontrolled tariffs) is tied to the cost consequences of usage through robust and transparent analysis. As a result, pricing is not sending efficient signals regarding the cost-consequences of peak usage, and this is likely to result in inefficient investment that will increase costs for all consumers.*"

We provide some explanations below in support of our disagreement drawing on some of Orion's current pricing approaches.

Orion has existing approaches to peak usage and is enacting its pricing roadmap to evolve improved price signals.

We signal this cost by having a control period and peak period charge with a well-designed TOU pricing structure. This incentivises the consumer to shift demand, and in turn this will over time help to reduce costs to all consumers as EDB's do not need to build as much capacity.

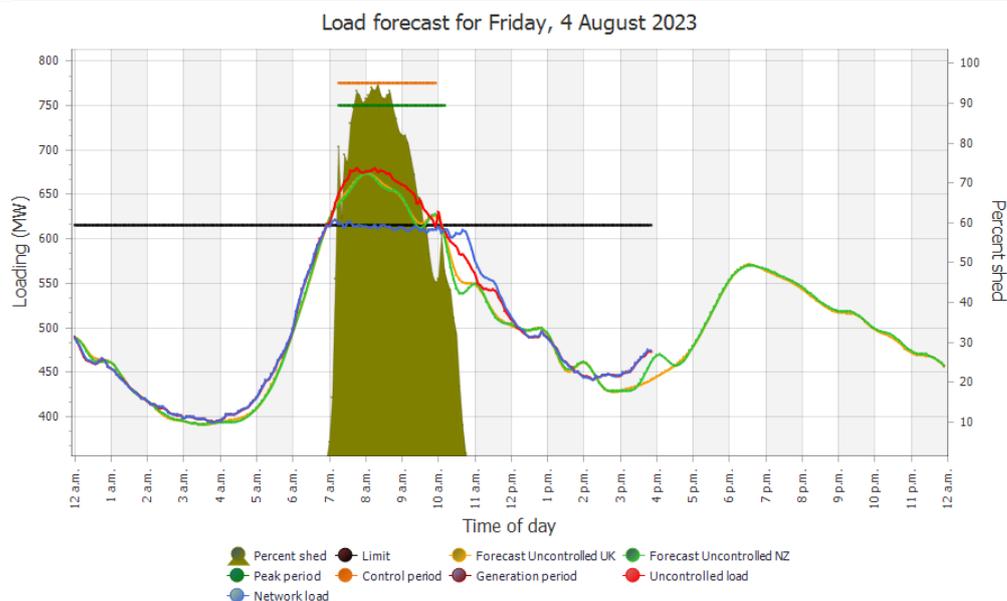
Pricing Periods:

A significant proportion of our costs are driven by the need to meet peak loading demands. To ensure that consumers make appropriate decisions about when and where to use electricity, we signal this cost driver in our delivery charging via the use of peak periods (for general connections) and control periods (for major customer connections).

Regular load management tends to flatten out any peaks, so we calculate "uncontrolled load" (our estimate of the loading levels that would have occurred if we had not controlled load) and use this to trigger our pricing periods. We adjust the on and off trigger points throughout the year to focus on the periods of highest loading without exceeding our target annual duration.

Load Graphs (see example below)

Under current peak signalling for hot water control, the network limit (the black line) is set as a target to keep costs and prices down. The network can cope with higher loading levels for short periods, but eventually we will then need to invest in more capacity to maintain an appropriate buffer for growth and security. Also, the uncontrolled load (the red line) is not the actual loading level, it's an estimate of the loading level that would have occurred if we had not actively been managing load.



Interruptability rebate

An optional interruptibility rebate is available in respect of larger irrigation connections that provide us with the ability to interrupt supply in emergencies. The purpose of this rebate is to reduce the need for Orion to invest in contingency assets that are needed to provide backup following faults on our network.

If we can incentivise irrigation customers to allow interruption of some irrigation loads, especially for low probability high impact events, there can be sufficient capacity remaining in the network to continue with supply to more essential loads, such as dairy sheds, without the need to invest in infrastructure for such events. The savings from this reduced investment supports the rebate and lowers the overall cost of electricity delivery.

For price signals to be effective, consumers need to be exposed and react to them, this necessitates retailers passing through price signals, and/or AI technology and “set and forget” load management being able to reduce the demand at a house level (Home Energy Systems).

The industry as a whole needs to work to change consumer behaviour, which is not just through pricing reform, but through consultation and education, on how we can all do our part. If done correctly this should lead to a reduction of prices through natural progression.

Q6. Do you have any comments on the Authority’s preferred pricing for peak periods?

We lay out our response to each preferred pricing statement below:

Agree:

Platform Agnostic: We agree that discounted rates should be technology agnostic but should be in addition to hot water-managed tariffs with clear tariff rules around opt in and opt out.

Standardisation on ICP pricing: Orion currently does ICP pricing by consumer group but invoices retailers’ variable portion of their invoice using the Reconciliation Manager files (GXP). We are in the process of transitioning to a new billing platform that will enable us to fully transition to ICP pricing over a period of time. Therefore, we see no issue with this approach from the next regulatory price-path period.

Differential between peak and off-peak rates

We have pricing for controlled and peak period(s) which signal the cost to use in times of high demand in addition to peak and off-peak rates. This ensures that our signals are coherent and consistent between tariffs and consumer groups and is driven through our load management systems. We look further this with the introduction of TOU tariffs next year.

Efforts to ensure signals are coherent and internally consistent across and between tariffs and consumer groups.

By signalling the cost and having a control and peak period charges, with a well-designed TOU pricing structure, incentivises the consumer to shift demand (this is consistent between tariffs and consumer groups).

Rapid phasing out of deemed and residual profiles for smart meters

There are benefits for phasing out deemed and residual profiles from a network planning and asset management perspective. While we strongly support the phasing out of deemed and residual profiles, we submit that an orderly transition period may be required due to the potential impact on processes and systems for reconciliation by participants and the requisite costs. Retailers are responsible for metering and deemed profile data and would be important stakeholders to consult in this space.

Caution:

Rapid phasing out of uniform usage tariffs for networks with anticipated congestion

Whilst we agree that pricing reform in tariff structures are required, we would caution against “Rapid phasing out” of uniform usage tariffs. This has unintended consequences for the market and potentially directly billed customers, and whilst they might hedge through the wholesale market, the risk might be priced in and inadvertently passed onto consumer groups. The impacts would need to be considered:

1. retailers might need to replace their existing pricing and billing platforms, which can take time and will have cost implications for the end consumer.
2. retailers would need time to adjust their financial and market hedging arrangements.
3. reliability of TOU files to enable half hourly billing.
4. the number of tariff codes used by EDB’s.

Orion has some emerging congestion; we see this in the general consumer groups with growth in those consumer groups driving our forecasts. We are developing targeted TOU tariff, which is targeted to these consumer groups and is directly linked to costs.

Careful consideration is needed as relates to any approach that is locational in nature especially for highly meshed networks where more assumptions would need to be made potentially diluting cost reflectivity. As with the earlier concerns about step changes between capacity bands for tariffs issues this can also occur at the boundary between locational areas e.g., neighbours may not understand why they might pay more than someone across the street.

Q7. Are there other options you think the Authority should consider for improving peak period pricing?

We lay out our response to each preferred pricing statement below:

Refine Scorecards: The scorecards are helpful in guiding distribution networks on the expectations of the Authority and how the improvements we are making are working towards those. It would be helpful for the Authority to provide practical (how to) information. Some examples of best practice calculations for deriving LRMC estimates and converting them to tariffs and testing the coherence of price signals.

Control:

We would caution on prohibiting specific approaches as all EDB’s have nuances which they need to be cognisant of. However, there is merit in mandating some parts such as standardising data files across all retailers and EDB’s (The work done on the EIEP protocols might be a starting point), especially when the benefits outweigh the costs.

Collaboration is an avenue to explore more fully such as when calling in EDB pricing to focus on analysis and peak pricing or availability of appliance tariffs. We have found that an “open door” policy has allowed us the opportunity to have more frequent, open and in-depth conversations with the Authority. We feel this allows insight for both parties and as we make the changes to our current

pricing strategy, roadmap and methodologies that we are heading in the right direction, but also being acutely aware that this is a journey that will keep evolving over time.

Q8. Which if any of the above options do you consider would best support distribution pricing reform around peak pricing signals and why?

We support a well-designed framework with a combination of control and call-in. There are aspects that control would assist networks to make transitions faster, actual use of half hour data for all smart meters and the phasing out of GXP pricing. For “call-in” we submit that this approach would allow the Authority the time to monitor and consider the right Code changes required as the role of flexibility matures and distribution networks, retailers and flexibility providers have negotiated the initial path while allowing for innovation to occur bearing in mind networks need to deliver on their regulatory obligations.

As mentioned above and previously, we would encourage collaboration as an option to consider as control and “call-in” options could be seen as prohibiting innovation from evolving thinking around pricing and demand management (DER) as the space matures.

We support the proposal by the Authority to provide guidance on its preferred approach to the calculation of LRMC, working in collaboration with the ENA to design the guidance and estimation model.

Q9. Do you agree with the assessment of the current situation and context for off-peak pricing signals? What if any other significant factors should the Authority be considering?

Orion recently took the time to meet with the majority of retailers trading on our network and held four (4) online sessions. The goal was to:

1. discuss our roadmap for pricing reform.
2. understand what consumers need from distribution pricing.
3. understand how we can make TOU more attractive and effective.
4. understand what retailers would need to change in their own systems and the extent.

We reiterated that the ongoing focus on EDB pricing is to be cost reflective, and there is little benefit to the customer if they are not exposed to the cost reflective price.

We do not fully agree with point 5.7 with regards to off-peak pricing, *“in practice has no cost consequences that are typically negligible are marginal losses are low on lightly loaded equipment, and changes in off-peak usage wont (by definition) impact network capacity upgrade plans.”*

The below LV constraint map projects constraints against “free power” retailer offering(s) (off-peak) overlayed on our current constraints in each SA2⁶ zone. Approximately 50% of the retailer offerings of this nature are located in areas which are forecast to have 10 or more LV constraints with moderate growth in evening load. Our projected LV urban network constraints in 2030 grouped by SA2 definitions⁷ in our AMP⁷ references how this would impact network capacity upgrade plans.

⁶ Statistical Area 2 (SA2) boundaries for 2022 as defined by Stats NZ

⁷ <https://www.oriongroup.co.nz/assets/Company/Corporate-publications/Orion-AMP-March-2023.pdf>

**Christchurch City
LV constraint map (projected)**

Key:

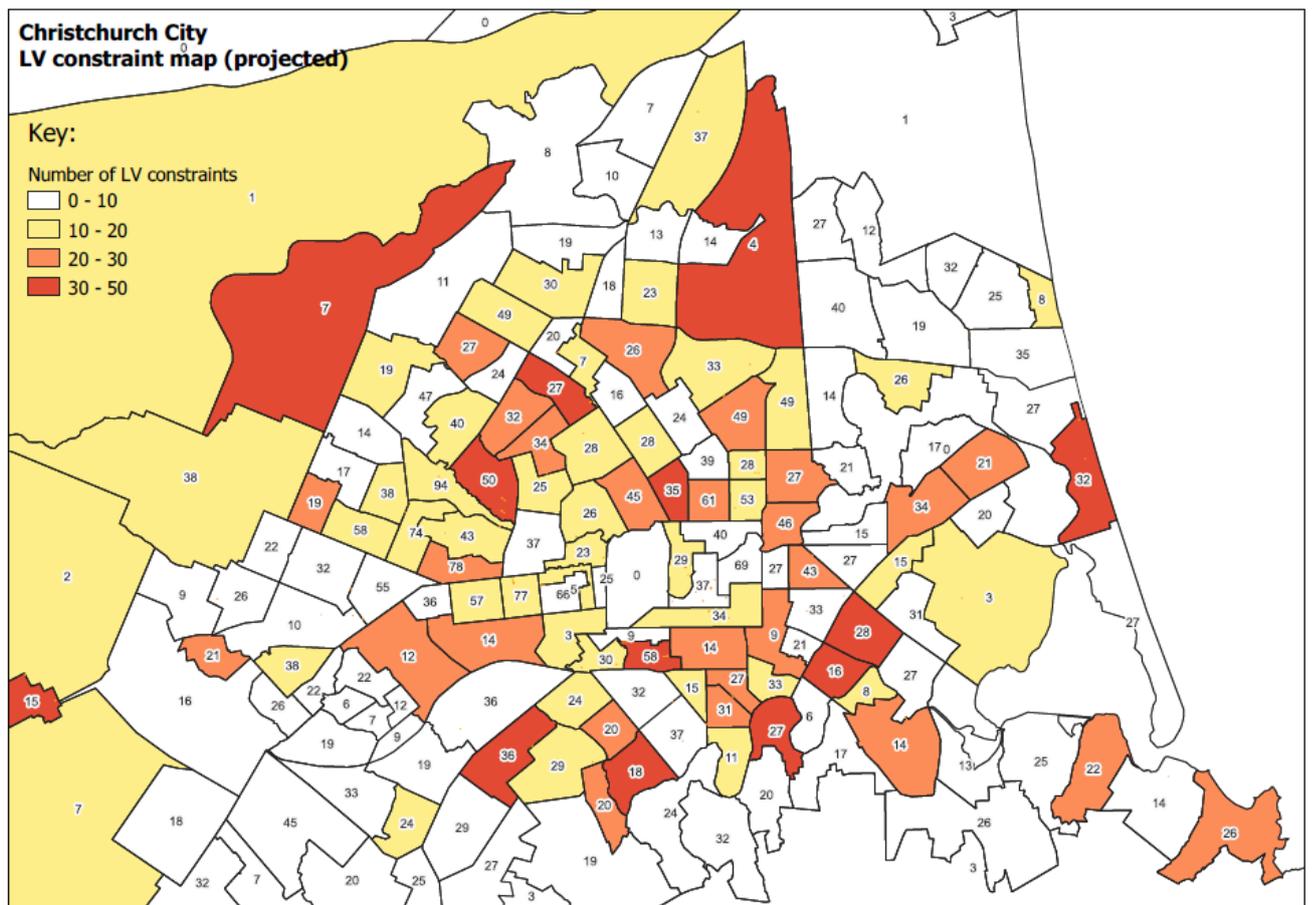
Number of LV constraints

0 - 10

10 - 20

20 - 30

30 - 50



Residual revenues are first recovered via fixed charges, then the balance from off-peak prices. The low user fixed charge regulation transition restrictions have a direct consequence on the amount of potential revenue recovery from fixed charges and therefore we recover greater revenue from variable pricing (off-peak pricing). EDB's recover these costs from off-peak prices rather than peak prices so as not to distort the peak price signal.

Q10. Do you agree with the problem statement for off-peak pricing signals?

The Electricity Authority's preferred pricing is for low or zero charges for off-peak usage with residual cost recovery achieved through fixed charges. In principle Orion agrees with this approach, with the caveat that the low fixed charge regulations limit our ability to meet this goal until transition is complete.

Additionally, the Electricity Authority should consider what the consumer needs. Many consumers will prefer the certainty of a fixed unit charge regardless of time consumed over the complexity of a rate that varies with time. Any options to reform pricing, should consider consumers' needs, and that only a subset of all consumers want to actively engage with the electricity industry.

Below is a high-level analysis with regards to price differentials for off peak pricing: As the percent of revenue received in the form of fixed charges increases, the potential difference between peak TOU and off-peak TOU rates diminishes. This means less of a "change the timing of usage" signal gets through and hence increases the risk of peaks occurring.

General Inputs for residential profile for analysis:

Number of days in the New Rate pricing year	366
Assumed capacity utilisation	2.40
Average Annual consumption	8000
Day Consumption Assumption	55%
Night Consumption Assumption	45%
Proportion of consumption – weekend	20%
Proportion of consumption – Peak	40%
Proportion of consumption – Shoulder	20%
Proportion of consumption – Saver	15%
Proportion of consumption - Super Saver	5%

Price differential as a percentage and dollar for standard Day/Night TOU:

Day price differential	84%
Night price differential	16.0%

Average Annual bill:

		Prices	Line charges
Fixed	Fixed charge - Res	\$ 0.4500	\$164.70
Variable	Peak charge (peak period demand)	\$ 0.0928	\$ 81.52
Variable	Weekdays (Mon-Fri 7am – 9pm)	\$ 0.0941	\$ 414.22
Variable	Nights and weekends (Sat & Sun)	\$ 0.0184	\$ 66.38
	Total average line charges		\$726.82

As we have been evolving our new pricing structures and understanding the impact(s) by using both controlled and uncontrolled rates and standard (inclusive rate) vs a smart consumption (TOU) the following differentials are likely:

Standard Uncontrolled vs. Standard Controlled Demand Charge differential	-33%
Smart Uncontrolled vs. Smart Controlled Demand Charge differential	-33%
Standard Uncontrolled vs Standard Controlled lines charges differential	-3.7%
Smart Uncontrolled vs Smart Uncontrolled lines charges differential	0.3%
Smart Controlled vs Smart Controlled lines charges differential	0.3%

Peak vs Standard anytime (all you can eat) price differential	50%
Off-peak vs Standard anytime (all you can eat) price differential	-75%
Shoulder vs Standard anytime (all you can eat) price differential	0.04%
Smart All you can eat weekend vs Standard anytime (all you can eat) price differential	-19%

Q11. Do you have any comments on the Authority's preferred pricing for off-peak usage?

5.19 AMD is an appropriate measurement of the proportion of the network capacity needed to service a customer group. EDB's need to design and build their networks to be able to meet peak demand, regardless of how often this occurs. This was recognised by the Authority in its choice to use AMD to set the residual TPM charges. Therefore, the same principle and logic should apply to EDB's when setting charges.

5.21 The Authority prefers that EDB's pass transmission charges through to their own customers in accordance with the guidance on pass-through of transmission charges that the Authority released in 2022. We have changed our pricing design to allow for this.

Whilst going through this exercise we learnt that some cost allocators can distort cost reflectivity and is a cause for some cross-subsidisation.

Q12. Are there other options you think the Authority should consider for improving off-peak pricing?

We lay out our response to each preferred pricing statement below:

Extend practice notes with principles-based direction:

We would support extending Practice notes. However, we caution on prohibiting uniform charges with narrow compliance criteria or setting any price caps. As we transition with decarbonisation and emerging technology starts playing a greater role with regards to appliance tariffs, there should be a natural evolution from current TOU structures toward approaches such as dynamic operating envelopes and dynamic TOU that will assist with demand management and consequently assisting with overall input costs.

Collaboration and Education:

Collaboration in the Industry along with a consumer driven engagement works program that can also be focussed on education on whole of system thinking and/or approach. The work the Flex Forum and Ara Ake are doing around MTR and P2P trading are options to be considered at a mass market.

We should continue to consider and not lose sight of what consumers might want:

1. they place a high value on the certainty of pricing.
2. will consumers adopt and respond to peak and off-peak pricing?
3. new ways to engage at their connection e.g., the work the Flex Forum and Ara Ake are doing around MTR and P2P are options to be considered at a mass market level and how this will impact distribution pricing.
4. new participants to engage with e.g., competing resources that allow EDB's to manage their input costs and pass-through costs.

Q13. Which if any of the above options do you consider would best support distribution pricing reform around off-peak pricing signals and why?

Similar to peak pricing reform (Q8) that industry and regulator collaboration will benefit consumers. This will ensure that the Authority is meeting its purpose.

Q14. Do you agree with the assessment of the current situation and context for target revenue allocation? What if any other significant factors should the Authority be considering?

In principle we agree that cost allocation is complex and that EDB's have developed models and methods to equitably allocate revenue across consumer groups.

In principle we agree with the claim that residential consumers are over-allocated a proportion of shared costs but acknowledge that there is an opportunity to improve consistency and understanding of target revenue allocators.

The other significant factors the Electricity Authority should consider are:

- reform and extend practice notes to assist with how to signal appropriately in addition to the guidance that has been provided by the Electricity Authority to date.

- the method by which the Authority engages with EDB's to improve and simplify their allocators.
- the consumer impact of any reallocation

Q15. Do you agree with the problem statement for target revenue allocation?

We agree that there is a need to understand subsidy free ranges and shifting away from complex allocation methodologies is likely to be beneficial.

Our engagement with the Authority over the past 18 months has assisted us to understand the focus on this area, and through this engagement we have had a better understanding as we designed our new cost of supply and pricing models, but we acknowledge that this might not be consistent across all EDB's, and the concerns have potential merit.

Q16. Do you have any comments on the Authority's preferred pricing?

In terms of the preferred pricing approach, Orion considers it is already meeting several of the points raised, including:

- accounting cost allocation to our large customers based on the assets they use.
- simpler metrics, such as consumer group energy consumption (GWh) and where appropriate, consumer group anytime maximum demand (AMD), used for initial allocation of target revenue (by voltage) to consumer groups.
- testing prices against subsidy-free range estimates.

Orion would encourage the Electricity Authority's preferred pricing approach to include education and engagement with EDB's, to understand their pricing approach and models so that appropriate feedback can be provided regarding the effectiveness of the allocators and methodologies.

Q17. Are there other options you think the Authority should consider for improving target revenue allocation?

Orion agrees that an approach that allows the Electricity Authority to fully explore and understand the range of EDB's views and undertake a collaborative engagement and analysis of cost allocation approaches would lead to a positive consumer outcome.

Orion does not agree with any proposal to unnecessarily regulate target revenue allocation, particularly when there has been limited engagement or education by the Electricity Authority on what EDB's are expected to be doing, to efficiently and effectively allocate target revenue across consumer groups. We feel this would be regulatory overreach.

Q18. Which if any of the above options do you consider would best support distribution pricing reform around targeted revenue allocation?

Regulation (including backstop regulation) will have unintended consequence, in effect set the requirements for pricing reform, which might lead to poor consumer outcomes if made before the issues and inefficiencies are understood and there are practical actions to address.

Orion does not agree with the introduction of regulation (including backstop regulation) until the Electricity Authority and EDB's have had the opportunity to work together to understand and address any issues and inefficiencies with current allocation practices.

Orion fully supports the proposal for more engagement and support from the Electricity Authority regarding targeted revenue allocation.

Q19. Do you agree with the assessment of the current situation and context for connection pricing? What if any other significant factors should the Authority be considering?

Orion acknowledges that the approach to allocating connection costs differ for each EDB. However, each EDB believes their approach is efficient and cost reflective.

Orion has recently undergone a review of the methodology applied to connection pricing, following a period of a more subsidised approach when rebuilding the city post-earthquake. We acknowledge that our methodology as we transition to a new period of decarbonisation and electrification, required

consideration, and we have been working on updating the connections pricing methodology. We consider our new methodology to connections pricing will be more efficient in the current context.

Orion's approach is to ensure that the balance between existing customers and connecting customers is appropriate e.g., existing customer do not face higher charges (now or in the future) solely due to new connections to the network.

Q20. Do you agree with the problem statement for connection pricing?

Orion agrees in principle that connection pricing is becoming more important as electrification drives a step change in activity seekers.

Orion agrees the different approaches by EDB's when setting their connection pricing, may lead to uneconomical signals and decisions.

However, if EDB's are not recovering the appropriate costs of the connection from the activity seekers, they will need to invest in the network to support the connection. This investment is added to the RAB, which is then used to set target revenue in future years. This approach could be construed as subsidising the cost of connection for activity seekers. Any subsidy for connection costs will incentivise more connections, but ultimately harm consumers who are paying for the connection costs via the increased RAB.

Orion is currently reviewing its approach to connection charges to ensure an appropriate balance between activity seekers and existing customers, including the balance on sharing on augmentation.

Q21. Do you agree with the Authority's preferred pricing approach for connection charges?

Orion agrees with the principle that connection charges should be subsidy free.

Orion does not believe that standardising all pricing options will be beneficial to consumers. Connections can vary from simple to highly complex and the connection costs will also vary greatly depending on the work and assets required to connect and the location of the connection.

Orion agrees with 7.27 that there would be value in consistency between EDB's around terminology, processes, and approaches and this would have value to access seekers to fairly evaluate connection pricing across networks when making investment decisions or investing across networks (nationally or across a number of regions).

Q22. Do you have any thoughts on the complementary measures mentioned above and to what extent work on these issues could lead to more efficient outcomes for access seekers?

Orion already has a pool of approved contractors that can be used by customers to seek prices for connection especially for non-standard connections. Orion has a prequalification and audit system to ensure our pool of contractors meet the network standards. We also run a contract performance program that meets monthly to share and review safety and performance issues.

Proposals to regulate this area risks conflicting with the "large connection contract" mechanism which allows connection assets to be excluded from the RAB where certain conditions around competition are met. This has been noted by the Electricity Authority in Appendix B, but not within the complimentary measures identified. Any regulation in this area would be considered regulatory overreach.

In terms of the publication of heat maps, increased access to smart meter data will help with the development of this information on the LV network. Connections to the HV network are less common and are typically very complex so will be of less value to access seekers.

Some smaller EDB's may have concerns that the proposed complimentary measures have not been fully explored or understood, given their geographics and relative size.

Q23. Are there other options you think the Authority should consider for connection pricing?

The issues raised regarding connection processes and connection charges are relatively new (raised within the past 12 months and not yet incorporated into pricing methodology updates).

As an alternative to the options provided in the paper, we prefer the Electricity Authority to take a collaborative approach to work with EDB's to develop practical industry guidance regarding the connection process and new connection charges.

Guidance can be sought to understand the broad objective:

- detail economic and other principles that would likely be relevant when contemplating capital contributions for an EDB.
- provide an overview of approaches that have and/or could be adopted and explain the economic rationale and considerations for each.
- principles and implications to allow EDB to have appropriate capital contribution methodologies.

Economics of connection charges:

- the installation of new assets to facilitate the connection to the distribution network.
- construction of dedicated infrastructure to extend the existing distribution network to the customers premises.
- update or expansion of capacity in the existing shared network assets to facilitate the new connection (augmentation or reinforcement assets).

The recovery of costs via a capital contribution charge(s) need to be balanced by several competing priorities:

- economic efficiency
- equity considerations
- environmental sustainability

Principled approach to estimating the incremental revenue:

- forecast revenue could be based on the price path set out in the DPP determination for the period and the relevant network tariffs as set out in the Pricing Methodology and Schedules
- a discount rate based on our approved regulatory WACC converted to pre-tax terms using the estimated average effective tax rate for the regulatory period.
- 30-year discount period to be applied for residential customers
- 15-year discount period to be applied for business customers when calculating the expected line charges recoverable from the customer.
- basic connection offer and the connection falls below the shared network augmentation charge threshold, can be excluded from the Incremental Revenue the portion of the charges attributable to augmentation of the shared network where it is estimated to be material.
- operational and maintenance costs have no net impact on the capital contribution payable by the customer.

Connections be considered standard with the relevant and recalculated fixed capital contribution applying or non-standard with a cost revenue test applied.

Revenue Cost Formula for calculating non-standard Capital contribution (CC)

$$CC = ICCS+ICSN-IR (n=X)$$

Where:	
ICCS	Incremental Cost Customer Specific (is the incremental costs incurred by Orion that are specific to the connection)
ICSN	Incremental Cost Shared Network (the network costs incurred by Orion as a result of the new or altered connection, but which are not specific to the connection, such as network augmentation)
ICSN	= Unit Rate x Demand estimate
Unit rate	Average cost of network augmentation (other than an extension beyond the standard service line) per unit of added capacity, expressed as \$/kVA
Demand Estimate	Estimated maximum demand at the connection point measured in KVA
IR (n=X)	Incremental Revenue will be the NPV of all of the expected distribution line charges recoverable from the customer.

Q24. Which if any of the above options do you consider would best support distribution pricing reform in the area of connection pricing?

The Electricity Authority will need to consider the implications of any changes that impact EDBs capex or opex allowances and the mix between these (especially around connection charges) given the limited ability to reopen a 5-year price path.

Orion supports a collaborative educational approach that ensures that there is a baseline expectation regarding behaviour and allocation of connection costs.

Orion would support the Commerce Commission being involved in any change that materially impacts costs faced by EDBs and consumers, including connection costs.

Q25A. Do you agree with the assessment of the current situation and context for retailer response? What if any other significant factors should the Authority be considering?

While the use of deemed and residual profiles is common within the settlement of the wholesale electricity market, Orion is not aware of any electricity retailers that are providing us 'through day' or 'peak vs. off-peak' data based on a profile. Orion expects all data for billing to come from HHR meters or NHH meters with registers that have been configured to match the time periods for 'through day' tariffs.

An important factor not covered in the assessment is the purpose of the non-uniform tariff. Orion considers the purpose of the non-uniform tariff is:

For "**passive**" tariffs - to signal to consumers the costs associated with consuming during peak and off-peak periods.

For "**active**" tariffs – to signal the value of having access to demand that can be controlled.

Critically these are a signal for consumers, not to retailers and require the consumer (not retailer) to respond.

The ability of retailers (particularly large retailers) to manage non-uniform tariff input costs. Large retailers are likely to have a more balanced "after diversity" peak demand that will naturally hedge the variability of a non-uniform tariff.

Understanding what consumers want, and if they value a stable tariff over a non-uniform tariff. The benefits of a non-uniform tariff will not be met unless consumers are exposed to and are willing to respond to price signals. We would need more community engagement to understand if consumers would be willing to permanently alter their consumption behaviour if exposed to non-uniform tariffs, short of this, the potential is higher costs to consumers as retailers increase the risk premium for plans available to consumers.

Q25B. [**for retailers**]: What plans do you have for responding to distribution price signals as distributors reform their price structures? What barriers do you see to responding efficiently?

No Comment

Q25C. [**for distributors**]: What plans do you have to increase the proportion of your customers that face time-varying charges (for example, making TOU plans mandatory for retailers whose end-users have an AMI meter installed)?

We will look to transition customers to TOU pricing provided the customer has an AMI meter installed and, with strict criteria to opt out.

Q26. Do you agree with the problem statement for retailer response?

For distribution pricing reform to be effective, consumers need to be exposed to the price signals.

The two problems statements raised:

Continued use of deemed or residual profiles for network billing – we are not aware of this occurring and network billing is based on data provided by retailers and sourced meter readings allocated to the correct time periods. If a retailer is not providing accurate information this is a significant concern beyond pricing reform.

Overly permissive assignment policies for transitioning ICPs to non-uniform tariffs – this is symptomatic of poor retailer pass-through of price signals. As highlighted by the Authority, allowing retailers to ‘selectively choose’ which ICPs are placed on TOU tariffs when they do not pass the signal through to consumers will not result in a behaviour change from consumers and will incentivise “windfall gains” from allocation of price categories.

We submit that the Authority should encourage retailers to attempt to preserve EDB TOU signals through to customers, subject to their own commercial cost drivers.

Q27A. Do you have any comments on the Authority’s preferred pricing?

We agree that retailers should be billed volumes on their actual half hourly usage (ICP billing) and EDB’s providing limited grounds for opting out of non- uniform tariff.

A transitioning period for both retailers and EDB’s will be required, however we also need to think through the unintended consequences around metering agreements, communication and what the impact will be if meters are not able to communicate effectively or have communication failure.

With more granular HRR data, EDB’s would have better view of their LV networks and emerging congestion. With a better more accurate understanding of what is driving the congestion and at what times of the day this will enable EDB’s to look at the ‘windows of opportunity’ on building and using demand management and flexibility services.

Q27B. [**for retailers**]: What use do you make of deemed and residual profiles? Please explain the reasons for this. What barriers do you see to phasing out use of deemed and residual profiles?

No comment

Q28. Are there other options you think the Authority should consider for retailer response?

Additional option would be to extend the monitoring of retail pricing to include applying a scorecard approach to retailers regarding how effective they are at passing EDB price signals through to consumers⁸, as per Option C1 of the EA/MDAG consultation:

- available Demand Side Flexibility (DSF), incentivising tariffs, potentially extending to the number of ICPs in different tariff categories.
- the proportion of consumption volumes being reconciled via profiles rather than half-hourly data.
- the usage and performance of its dispatch notification product (once introduced)
- in collaboration with the Commerce Commission, information relating to ripple control of hot water across the country.

This approach could also look to assess the effectiveness of the signals in influencing consumer behaviour, which ultimately reduces the cost to supply consumers for both distribution and energy.

Orion does not agree with implementing any backstop regulations. The proposals the Electricity Authority are considering may not provide long term consumer benefit. Regulation (including backstop regulation) will set the requirements for pricing reform and is likely to lead to poor consumer outcomes if made before the issues and inefficiencies are understood and there are practical actions to address.

Consistent with the theme of this submission, the Electricity Authority should collaborate with retailers and EDBs to understand the challenges and benefits of non-uniform pricing and consumer response to price signals. This can help ensure that there is a shared understanding and clear goals.

8.26 states: *We expect to see distributor innovation in broadening availability of appliance tariffs and progress at ensuring appliance tariffs are made cost-reflective (e.g., by providing anytime access to off-peak rates).* We would also like to reinforce the need for a workable innovation allowance/funding (Commerce Commission) or exemptions from the Code to enable exploration and innovation in partnership with retailers, flexibility suppliers and consumers in the pricing space.

Q29. Which if any of the above options do you consider would best support distribution pricing reform in the area of retailer response?

As noted by the authority, retailers have a role to play in managing network input costs on behalf of their customers.

We support:

8.23 Retailer transition to billing on actual data and developing guidance on tariff assignment.

8.25 EDBs ability to retain an opt in/ opt out approach, with limited access to exemptions.

8.26 appliance tariffs which are separate to ripple controlled hot water subject to the Authority defining clearly what is meant by appliance tariffs.

8.28 monitoring retail pricing would help build a better scenario of how well pricing reform is working, around peak and off peak.

⁸ [Library of options \(ea.govt.nz\)](http://ea.govt.nz)