

# Distributors' Pricing 2019 Baseline Assessment

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19 November 2019



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### Summary of findings

- 1.1 Distributors urgently need to improve the efficiency of their distribution prices because technology is rapidly changing how electricity is produced and consumed. These changes affect how distribution networks are used, and how distribution services should be priced. Cost-reflective pricing is for the long-term benefit of consumers, by ensuring that distributors make efficient investments in their networks and consumers make efficient network use decisions and investments in solar power, batteries, and electric vehicles.
- 1.2 The Authority is monitoring pricing reform and in our 2019 baseline assessment we found:
  - (a) Distributors have work to do. In particular, pricing needs to be improved for residential and smaller commercial customers. As expected, the first baseline assessment scores distributors' pricing methodologies and plans in the middle to lower part of the range.
  - (b) Distributors are at different stages in their journey towards efficient pricing: some have made good progress in reforming their pricing strategies while others are just beginning. The Electricity Network Association is supporting and promoting industry-led pricing reform efforts with analysis, tools and coordination.
  - (c) Weaker areas related most commonly to the *efficiency* of current pricing, the rationale behind the *strategy*, and explicit consideration of *consumer impacts*.
  - (d) While distributors are often clear about the pricing structures they are seeking to adopt, they can do more to explain the reasons for their pricing choices. Reasons should relate to the pricing principles.
  - (e) For many distributors, rebalancing revenue from variable to fixed charges is an important step towards efficient pricing. Currently, variable (volume-based) charges are still the predominant source of revenue for most distributors. But these are not cost-reflective, that is, they do not reflect how costs vary with the use of the network.
  - (f) Distributors describe the low fixed charge (LFC) regulation and data access as material barriers to efficient pricing. The Authority concurs there are constraints, but these do not mean distributors cannot make any progress on pricing reform. (In its response to the Electricity Price Review, the Government indicated that the phase out of the LFC regulations should not be completed in advance of measures to reduce energy hardship and to help non-switching consumers to find better deals.)
  - (g) Many distributors see time of use pricing (TOU) as a satisfactory end-point, rather than a step towards more efficient pricing. TOU has limitations, for example, because it puts a higher price on peak load even when there is no capacity issue.
  - (h) Locational- or density-based charging is used by only a handful of distributors for mass-market consumer groups. However, location is often a cost-driver, and making pricing more location-specific may increase the efficiency of prices.
  - (i) Pricing for larger non-residential customers tends to be more cost reflective, aligning more closely with pricing principles by reflecting both time- and location-specific congestion signals.

## 2 Assessment of distributors' 2019 pricing methodologies

### The purpose of this baseline assessment

- 2.1 This assessment of distributors' pricing methodologies is part of the Authority's approach to encourage and support distributors to adopt more efficient distribution prices, sooner.
- 2.2 Distributors' prices need to do two primary jobs. They need to signal the economic cost of using local electricity network services, and they need to generate enough revenue to recover the efficient cost of the distribution network.
- 2.3 The design of distribution prices has significant consequences. If prices do not reflect the economic cost of providing network services, this will cost consumers. Currently, distribution prices are generally not cost-reflective.
- Distributors run primarily fixed-cost businesses, but tend to charge on volume (\$ per kWh), with charges that are not linked to the economic cost of using the network.
  - Consumers can buy and use technologies to avoid these charges – meaning others need pay more instead, as the cost of the network does not change.
  - Flat volume-based charges do not signal when and where it is more costly for consumers to charge electric vehicles or use other power-hungry appliances.
  - By contrast, a more economic and granular pricing approach can better reflect the impact of consumer choices on electricity distribution costs, such as a customer's contribution to network congestion and future network investment.
- 2.4 This assessment complements valuable industry-led efforts to promote more efficient distribution pricing, by analysing different pricing options, and offering frameworks and tools. Authority assessments will be repeated annually to track progress, identify good practice, and provide constructive feedback where progress lags.

## 3 Information reported on by the Scorecards

- 3.1 The Authority has examined the 2019 pricing methodologies and roadmaps produced by each of the 29 distributors.<sup>1</sup>
- 3.2 The August 2019 Note on Distribution Pricing Scorecards explains the dimensions that have been used to assess distributors' pricing methodologies.<sup>2</sup> In brief, the assessments consider three outcomes covering six underlying dimensions:
- (a) Current State: the distributors' assessments of local **circumstances** and the alignment of their current pricing with the **pricing principles**
  - (b) Strategy: Authority staff's assessment of distributors' **pricing strategies** and distributors' **implementation roadmaps**
  - (c) Outcomes: Authority staff's assessment of the **efficiency** of current pricing and consideration of distributors' plans to manage **consumer impacts**.
- 3.3 The aim of the assessment is to highlight good practice, identify weaknesses and gaps, and to suggest opportunities for improvement. This first assessment provides an anonymised overview of scores, as part of the road-testing of the methodology. In future years, individual scorecards will be published alongside a non-anonymised overview report.

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<sup>1</sup> Some information was taken from pricing schedules and occasionally websites. Unless explicitly referenced in the pricing methodology, asset management plans were not considered.

<sup>2</sup> See <https://www.ea.govt.nz/development/work-programme/pricing-cost-allocation/distribution-pricing-review/development/distribution-pricing-practice-note-and-scorecards/>.

## 4 Key findings from the 2019 baseline assessment

4.1 Reform towards efficient pricing is underway, albeit slowly overall. Our key findings are:

- (a) **Distributors are at different stages in their journey towards efficient pricing:**
  - (i) three distributors have made material changes to their pricing structures, while some (5/29) have well-defined plans for implementation in 2020
  - (ii) almost half of distributors (13/29) have high level plans for reform and are relying on ENA processes, while a smaller proportion (8/29) are taking a wait-and-see approach and have not progressed very far in reforming their prices.
- (b) **There is often little clarity about the rationale underpinning their current or future pricing plans.** Common gaps include:
  - (i) consumption patterns and the extent of current or expected congestion (if any), which should influence pricing design
  - (ii) how (and why) time- and location-related costs of network use are signalled to consumers.
- (c) **Variable (volume-based) charges are still a major source of revenue**, but some distributors are rebalancing towards more fixed charges.
- (d) **Many see time of use pricing (TOU) as a satisfactory end-point**, rather than a stepping stone towards more efficient pricing. TOU is used by many distributors (22/29) but has limitations, for example, because it puts a higher price on peak load even when there is no capacity issue.
- (e) **Locational- or density-based charging is used by just under half the distributors** (12/29) for mass-market consumer groups, even though location is a cost-driver for most networks.
- (f) **Pricing for larger non-residential customers tends to be more cost reflective**, aligning more closely with pricing principles by reflecting both temporal and locational-specific congestion signals.

## 5 Assessed scores for distributors

5.1 Table 1 shows how we scored the 2019 pricing methodologies for each distributor. These scores are indicative only, as we are road-testing the assessment methodology. We will discuss each score with the corresponding distributor.

5.2 The assessments allocate a score (between 1 and 5 points, where 5 is good) to each of the six dimensions presented in section 3 above. An average (mean) score is calculated for Current State, Strategy and Outcomes, and for an Overall Rating, reported to the nearest half point. Appendix A presents the qualitative assessment criteria for each dimension.

5.3 To create the summary results table, scores were anonymised and then ranked by 'overall rating'. Publishing the summary allows distributors to better understand their relative position amongst other distributors, indicating the strengths and weaknesses of their pricing methodology.

5.4 The Authority's expectations about progress will ramp up over time. This means that an aspect that attracted a rating of, say, three this year may be scored less generously in future years. Stricter scoring is intended to motivate improvement over time.

**Table 1: 2019 scores (indicative) for distributors' pricing methodologies**

Scoring key: Scoring is between 1-5, where 5 (green) is good: 1 2 3 4 5 N/A= not applicable.

See Appendix A for the qualitative description for scores 1-5 for each assessment dimension

Distributor	CURRENT STATE		STRATEGY		OUTCOMES		Overall Rating
	Circumstances	Principles (accord with)	Strategy	Roadmap	Efficiency	Consumer impact	
Distributor-1	3	3	1	2	2	1	2
Distributor-2	2	3	2	2	2	1	2
Distributor-3	2	3	2	2	3	N/A	2.5
Distributor-4	3	3	2	2	2	3	2.5
Distributor-5	3	3	3	3	3	3	3
Distributor-6	3	3	3	3	3	3	3
Distributor-7	3	3	3	4	2	N/A	3
Distributor-8	3	3	3	3	2	3	3
Distributor-9	3	3	3	4	3	3	3
Distributor-10	3	3	4	4	2	N/A	3
Distributor-11	3	3	4	3	2	N/A	3
Distributor-12	3	3	3	4	2	N/A	3
Distributor-13	3	4	3	3	2	N/A	3
Distributor-14	3	3	2	2	4	N/A	3
Distributor-15	3	3	3	3	3	N/A	3
Distributor-16	3	3	3	3	2	3	3
Distributor-17	3	3	2	2	4	N/A	3
Distributor-18	3	4	3	4	2	2	3
Distributor-19	3	3	3	3	3	N/A	3
Distributor-20	3	3	3	3	3	2	3
Distributor-21	3	3	3	2	3	3	3
Distributor-22	3	3	3	3	3	3	3
Distributor-23	4	5	3	2	3	2	3
Distributor-24	4	4	4	3	3	3	3.5
Distributor-25	4	3	3	3	3	4	3.5
Distributor-26	4	3	3	4	3	N/A	3.5
Distributor-27	3	3	3	4	4	3	3.5
Distributor-28	3	4	3	3	3	4	3.5
Distributor-29	4	3	3	4	3	3	3.5

- 5.5 The Overall Ratings are mostly in the middle of the scoring range. This is because all methodologies had gaps: usually the information provided is not sufficiently compelling to be able to judge that pricing structures are efficient, given the local circumstances. It was also insufficient, generally, to provide reassurance that there is a pricing reform strategy in place that will eventually deliver efficient outcomes.
- 5.6 Low scores are more prevalent for the *efficiency, strategy and consumer impacts* dimensions of the Scorecards, and tend to cluster with particular distributors. We encourage all distributors to actively consider and manage consumer impacts. The highest (individual dimension) score was issued for one distributor's approach to self-assessment of their pricing against the *pricing principles*.
- 5.7 Some distributors scored low on the *roadmap* dimension. We encourage all distributors who are yet to produce an implementation plan to develop an up-to-date roadmap.

## **Current State**

### ***Circumstance: good descriptions, scope to link to pricing methodology and strategy***

- 5.8 Most distributors provide clear descriptions of their regulatory environment and key network features, such as physical network characteristics and the characteristics of residential and larger consumers. In general, however, distributors did not make a clear link between these characteristics and their pricing methodology or strategy. For example, they often provided little information about actual or potential network congestion and whether price signals to reallocate load through time would thus be useful.
- 5.9 Evidence of consideration of load profiles by group, time and location, and network capacity/congestion (if any), linked to implications for efficient pricing, would be welcome.

### ***Pricing principles: can do more to show how pricing signals economic cost***

- 5.10 Most distributors consider their pricing plans to be consistent with the pricing principles. However, distributors tend to be less clear about whether and how well their price plans reflect economic costs.
- 5.11 Distributors were scored higher in this category when they related their own network and load characteristics to their efficiency of pricing plans, supported by tangible examples. We encourage all distributors to explain the economic rationale underpinning their pricing structures, that is, whether and how prices signal the economic cost of using the network and the efficiency of the approach to recovering the remainder of their revenue target.
- 5.12 Many distributors use price differentiation:
- (a) Many distributors have day/night rates or some other form of TOU pricing (22/29) and controlled/uncontrolled tariff options. Many distributors see further development of TOU tariffs as a step towards efficient pricing, to incentivise load shifting or to signal the cost of expanding the network.<sup>3</sup> Regardless of their pricing strategy, we encourage distributors to explain the rationale and economic basis for resulting prices.
  - (b) Locational- or density-based charging is used by a dozen distributors, and is usually explained as necessary to efficiently allocate costs. Distributors with a mix of low and high density areas or congested and uncongested locations, but no locational pricing differentiation, should consider whether spatial pricing signals might be more consistent with the principles.

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<sup>3</sup> The absence of nodal pricing within distribution networks necessarily leads to different approaches to signalling economic costs than might be possible for transmission pricing.

- 5.13 We also encourage more information on whether prices are subsidy free for consumer groupings and locations by showing the estimated incremental and standalone costs – there were only a few pricing methodologies that had estimates of these costs.

## **Strategy**

### ***Pricing strategy: connect pricing strategies to network circumstance and capacity***

- 5.14 Many distributors are considering adopting TOU pricing for mass market consumer groups. Some distributors are signalling that they intend to recover a larger share of their target revenues from fixed charges – which can be an efficient pricing strategy when there are few network-capacity or -voltage issues.
- 5.15 The efficiency of TOU depends on the load and congestion characteristics of networks. We encourage distributors to explain how their pricing strategies connect to these network characteristics – for example, to match the network to seasonal load or EV uptake. More granular locational price signalling may be beneficial. For example, that would make it clearer when and where network alternatives, such as micro-grids and batteries, are more efficient than consumers being network-connected.

### ***Roadmaps: some good plans and progress updates, but others are MIA***

- 5.16 Some distributors (8/29) have presented good action plans, complete with specific objectives, activities, timeframes and other resourcing implications for pricing reform, and regular updates on progress. The majority (13/29) provided high level overviews of their intentions, together with engagement in the pricing reform efforts coordinated by the Electricity Network Association. A smaller number (8/29) noted that they were at an early stage in reviewing their plans, and were not in a position to provide detailed roadmaps.
- 5.17 The Authority considers progress on pricing reform is necessary and urgent, and so encourages all distributors to create and update implementation plans. The Authority has heard the feedback that a six-monthly update of roadmaps, as currently expected, is not useful. We agree, and from now on the Authority expects distributors to publish an updated distribution pricing reform roadmap only once a year with its pricing methodology. (However, distributors are free to provide more regular updates if they wish to do so.)

## **Outcomes**

### ***Efficiency of pricing: considerable room to improve***

- 5.18 Higher scores were allocated when distributors explicitly connected pricing to network demand load and congestion. Lower scores were allocated when there appeared to be cross-subsidisation of consumer groups. TOU only scored well if it was clearly aimed at resolving congestion issues. In some cases, the congestion issue was local to particular areas in distribution networks. In those cases we encourage more targeted, location-specific approaches (to avoid inefficient price signals in other locations).
- 5.19 Distributors that were rebalancing the price mix from volume-based to fixed charges got a higher score, particularly when fixed charges were very low, and congestion is clearly not a problem, nor expected to become one. Locational charging is particularly relevant for networks with a mix of high and low density areas. Even within a wider urban area, it may be desirable to have locational charging for network locations that have materially different load and congestion profiles, for example, due to increasing demands posed by electric vehicles.
- 5.20 Pricing for larger non-residential customers tends to be more cost reflective, often consisting of capacity based fixed charges and reflecting both temporal and locational-specific economic cost of using the network.

### ***Consumer impact: explain and manage the impacts of price reform***

- 5.21 We recognise many distributors are concerned about the impacts of pricing reform on consumer groups, and a small number of distributors present careful approaches to identifying consumer impacts. However, scores reflect that the pricing methodologies often include only limited information on what distributors are doing (or are going to do) to manage customer impacts.

## **6 Challenges to pricing reform**

- 6.1 Distributors have mentioned challenges that are viewed as constraints to efficient pricing:
- (a) Regulatory uncertainty: pricing methodologies frequently referenced uncertainty stemming from the 2019 Electricity Pricing Review; changes to transmission pricing; the 2020 reset of price-quality paths by the Commerce Commission; and changes to distribution pricing principles.<sup>4</sup>
  - (b) The low fixed charges (LFC) regulation: pricing methodologies often state that the LFC regulation precludes offering efficient pricing structures to low use households.
  - (c) Challenges accessing consumer data: low penetration of advanced metering infrastructure and poor access to consumer data are often cited as impeding the modelling of distribution prices necessary to mitigate revenue risks and to understand consumer impacts.
  - (d) Diluted price signals: distributors worry that retailers may resist passing through cost-reflective tariffs to consumers, thus nullifying their reform efforts. For example, retailers may be unwilling or unable to manage many different distribution tariffs.
  - (e) Differential rural and urban pricing: A small number of distributors mistakenly believe that a pricing methodology cannot contain an urban/rural differential.
- 6.2 We acknowledge that price reform presents challenges, though these do not mean there are no new pricing options or that no progress can be made on price reform. We look forward to discussing barriers and potential solutions with distributors.
- 6.3 Some of the challenges have been or are being addressed by distributors, for example through the Electricity Network Association's strategic pricing working group's initiatives, the Authority's and IPAG's work programmes, and other policy processes such as the Government's response to the Electricity Price Review.

## **7 Next steps: discuss results and annual assessments**

- 7.1 The 2019 baseline assessment is the first of what will be an annual progress report on pricing reform. We will discuss this report and our assessment of each pricing methodology with each of the 29 distributors.
- 7.2 From 2020 this overview report will also contain a scorecard for each distributor. The scorecards will be discussed annually with distributors. These discussions will test the application of principles and price structures to each network's context, highlight leading practice, and identify and help with roadblocks to more efficient pricing.
- 7.3 The next assessment will be completed following the annual pricing disclosures due by April 2020.

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<sup>4</sup> The revised distribution pricing principles were released in June 2019, several months after distributors' 2019 pricing methodologies were released.



## Appendix A: Scores – what would good look like?

A.1 The three outcomes and six assessment dimensions are shown in Figure A1.

**Figure A1: Assessment structure for scoring**



A.2 Scoring against the above six dimensions was undertaken on an 'absolute' rather than a relative 'best in class' basis. The assessment required scoring each distributor against each dimensions on a 1-5 point scale where 5 is good, with not-applicable (N/A) a possible score for Consumer Impact.

A.3 Each score, represented by five filled or unfilled circles, has a corresponding static text description, as shown in Table A1 below.

**Table A1: Understanding the scores**

Outcome	Dimension	Score	Indicates
CURRENT STATE	Circumstance	●○○○○○	Substantial gaps, incomplete performance or substantial inadequacies
		●●○○○○	Fairly material gaps or inconsistencies
		●●●○○○	Some gaps or communication unclear or unaddressed problems
		●●●●○○	Good, though not necessarily perfect, performance
		●●●●●●	Leading practice
	Principles	●○○○○○	Not addressed
		●●○○○○	Limited assessment. Incomplete, or not clearly explained
		●●●○○○	Some gaps or communication unclear
		●●●●○○	Complete assessment of consistency. Inconsistencies identified and explained
		●●●●●●	Leading practice
STRATEGY	Strategy	●○○○○○	Not addressed
		●●○○○○	Incomplete
		●●●○○○	Gaps in description of direction or rationale, or horizon too limited
		●●●●○○	Clear direction with suitable horizon and linked to circumstances and principles
		●●●●●●	Leading practice
	Roadmap	●○○○○○	Not addressed
		●●○○○○	Limited evidence of planning, or activities appear <i>ad hoc</i> or poor fit with strategy
		●●●○○○	Planning incomplete; not consistent with strategy; activities partially successful
		●●●●○○	Activities identified, coherent, well implemented, linked to strategy/implementation
		●●●●●●	Leading practice
OUTCOMES	Efficiency	●○○○○○	Major unaddressed efficiency issues or information gaps
		●●○○○○	Unaddressed efficiency issues or gaps
		●●●○○○	Minor unaddressed efficiency issues
		●●●●○○	Reasonably efficient in context of pricing strategy
		●●●●●●	Leading practice
	Consumer impact	N/A	Not applicable (ie, negligible changes in consumer impact from current pricing)
		●○○○○○	Major change management issues or consumer impacts
		●●○○○○	Unaddressed change management issues or consumer impacts
		●●●○○○	Minor change management issues or consumer impacts
		●●●●○○	Effective management of change and consumer impacts
●●●●●●	Leading practice		