



Pricing Workplan Electricity Distribution Network

**Pursuant to the Electricity Distribution Information Disclosure
Determination 2012.**

Effective from 1st April 2021

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EA Networks pricing development workplan

EA Networks is the trading name of Electricity Ashburton Limited. We own and operate the electricity distribution network located in Mid Canterbury. We are a consumer owned cooperative with every connected customer entitled to own shares in the company.

Our network delivers electricity to households and businesses across an area of about 3,500km², between the Rangitata River in the south, the Rakaia River in the north and the foothills of the Southern Alps in the west.

This pricing development workplan sets out for electricity suppliers, local consumers, regulators and interested parties why and how EA Networks plans to evolve its pricing in the next three to five years.

Purpose of this workplan

EA Networks has prepared this pricing development workplan to document the activities we will undertake to develop pricing structures which – to the extent practicable – reflect the underlying cost to provide the energy delivery services required by our customers.

Practically speaking, we plan to adopt pricing structures – to the extent practicable – which apply fixed and variable price components and price levels that align to the fixed and variable costs of supply for each customer (load) group.

This workplan describes:

1. Context and reasons for the pricing development workplan
2. Pricing development activities, near-term and longer-term
3. Capability and resources required for pricing development.

This workplan is a living document we will use to signal potential changes to our pricing approach and pricing methodology. We believe it is important to clearly signal changes to our methodology, price structures and price levels given the implications for choices by consumers on our network and for how we manage and invest in our network.

Context for this workplan

The context for this workplan are the network, consumer, and regulatory considerations which influence how we manage, maintain, and build the network. These are described more fully in our [Pricing Methodology](#) and our [Asset Management Plan](#).

We expect significant changes to the regulatory and consumer considerations in the three to five years from 2021-22. These changes are likely to require an evolution to our pricing approach and pricing structures.

The regulatory context is changing

The regulatory context is changing. In the near term, two regulatory changes will fundamentally affect how and when we evolve our pricing:

- revision or revocation of the requirement to offer a low fixed charge to households imposed through the Electricity (Low Fixed Charge Tariff Option for Domestic Consumers) Regulations 2004
- introduction of a new transmission pricing methodology, with new transmission pricing applying from April 2023 at the earliest.

The nature and expected near-term implications of these two regulatory changes are described below.

In the longer term, our pricing will evolve to reflect the expectations for more efficient pricing described in the Distribution Pricing Principles published by the Electricity Authority in June 2019. Pricing will also evolve to reflect the requirements of the Commerce Commission Electricity Distribution Services Default Price-Quality Path Determination 2019.

We also expect our pricing will need to evolve in response to regulatory interventions relating to commitments to reduce carbon emissions.

Nature and timing of changes to the low fixed charge

We offer a low fixed charge to about 15,000 connections (more than 75%) in the General customer category supplied under the GS20 price structure. The low fixed charge component (15c/day) creates a material mismatch between prices and costs of supply for these connections, thereby having perverse and inefficient impacts on consumer consumption and investment decisions. We expect these inefficient consumer decisions to have increasingly adverse effects on consumer decision making (regarding, for example, solar panel installation) and our network management investment decisions.

Meeting expectations regarding efficient distribution pricing means raising the level of the fixed charge for the GS20 price structure (at minimum). However, this is not a simple exercise, particularly due to the potential consumer impacts, eg, bill shock. As such, prior to adjusting price levels, we would undertake extensive preparatory work, particularly on the cost allocation methodology, consumer impact analysis, developing transitional arrangements (if required), and communicating with consumers and retailers.

The nature of the change and extent of preparatory work required means we need clarity regarding the nature and timing of regulatory change before beginning the pricing change process. We see material risks to the change process of making public commitments to change without clarity on how and when changes will occur to the low fixed charge requirement. However, we can and will begin with behind-the-scenes preparatory work, particularly to build our customer impact analysis capability. This will naturally be based on assumptions about the future direction of regulatory changes.

Nature and timing of changes to the TPM

Annual transmission costs significantly increased between 2012 and 2018 from 15% to 28% of supply costs, but with significant volatility across years. Transmission costs for 2021-22 are forecast to be 19% of supply costs. For comparison, transmission costs make up 10.5% of the average electricity bill.¹

The year-to-year volatility is a problem for our customers and our pricing approach, particularly for customers in the Irrigation customer load group.

The volatility is due to the current Transmission Pricing Methodology (TPM) allocating interconnection costs to Regional networks using the Regional Coincident Peak Demand (RCPD) approach based on for 100 measurement periods (from the ~17,500 available). The approach means extreme weather events can lead to material changes to the cost allocation between Upper South Island (USI) networks as the 100 periods can switch between summer and winter year-to-year.

EA Networks is a summer peaking network with significant irrigation-related load. The other USI networks are largely winter peaking, in particular the Orion network. Hot dry summers result in high irrigation demand, whereas cold winters drive increased heating demand.

Summer peaks can see EA Networks representing up to 20% of USI load, compared to 4% for winter peaks. These percentages are applied to the interconnection cost allocation resulting in significant volatility in the allocation of transmission interconnection costs between USI networks, resulting in significant year-to-year volatility in transmission costs for EA Networks.

Transpower is currently developing a new TPM to reflect the TPM guidelines published by the EA in June 2020. The new TPM pricing approach is expected to reduce the volatility in transmission costs currently experienced by EA Networks. Based on the indicative timeline published by the EA, a new TPM with a new pricing approach may be in place from April 2023.

However, the nature and timing of changes to the TPM are not certain. The specific pricing approach will be known once the new TPM is approved by the EA. The suggested April 2023 timing assumes no material delays in the TPM development process. Consequently, it is not possible for EA Networks to understand or react to the pricing implications of a new TPM until mid-to-late 2022.

Managing risk and impact of volatile transmission costs

EA Networks is actively managing the impact of volatile transmission costs by bringing forward payment of Transpower new investment contracts to smooth annual transmission costs.

¹ <https://www.ea.govt.nz/consumers/my-electricity-bill/>

Early repayment of \$5.2 million in 2020-21 and \$2.4 million in 2021-22 will reduce year-to-year volatility in transmission costs by avoiding significant increases in future transmission costs. In effect, paying more now to minimise annual variation in transmission costs.

The early repayments mean customers face slightly higher charges in 2020-21 and 2021-22 than otherwise but will avoid material price spikes in later years. The prepayments did not result in a price increase, with average prices for all customer groups falling in 2020-21 and 2021-22.

The volatility in transmission costs is expected to cease with introduction of the proposed new TPM.

The ability to use early repayment of new investment contracts to manage transmission cost volatility is forecast to end from 2023-24. After this, if the TPM has not changed, EA Networks may need to rely more heavily on managing quantities to manage transmission costs for customers, where possible. As such, EA Networks needs to consider:

- the potential pricing implications of a new TPM from April 2023
- the potential pricing implications of a delay in a new TPM, ie, introduction from April 2024 or later.

EA Networks will consider its options during 2021-22 to identify its options in the event a new TPM is not in place by April 2023. For example, managing volumes to mitigate effects of the RCPD approach may require expansion of existing load management capability or increased use of distributed energy resources (DER) – these are non-trivial undertakings and are not without cost.

The consumer context is changing

We know our distribution charges inform and influence the choices of consumers connected to our network. These consumer choices determine our network management and investment decisions. As such, we want our pricing to provide the best possible information about the distribution-related costs of using and producing electricity on our network.

We expect consumers will alter how they use our network in the coming years as DER, energy efficiency etc provide more options for people and business to manage and avoid energy costs. We expect this trend to accelerate due to Government commitments to reduce carbon emissions.

Prices and costs need to be aligned to reflect the consumer context

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Consumer decisions to buy and use DER etc, and network investments, made now and in the coming 5-10 years will have long-term implications on the use of the network, the cost of electrification and to meeting of carbon emission reduction targets.

EA Networks has yet to observe any material change to network use impacting economic costs. Uptake of small-scale distributed generation and electric vehicles is ongoing, but gradual and currently not of any material significance. However, the inevitable change to network use of accelerated electrification will impact economic costs. The Climate Commission considers distributors will need to adjust network management and upgrade network infrastructure from 2025 to deal with an acceleration in electrification from 2030. We note however that EA Networks is just coming off the back of two decades of significant

network investment. As such, local implications of electrification must be considered with respect to the local network – not broad averages.

Deviance between prices and economic costs causes consumers and others using the network to make less efficient choices about using and producing electricity on our network, over time resulting in higher costs (and rising prices).

Table 1 shows the proportion of revenue recovered from each load group using fixed, capacity, and variable price components for 2021/22. The ‘ideal’ proportions of fixed and variable costs recovered by fixed, capacity and variable charges need to be confirmed. However, the proportions are not expected to be well aligned because pricing for the General customer load group is set with reference to the Electricity (Low Fixed Charge Tariff Option for Domestic Consumers) Regulations 2004.

Table 1 Proportion of customer group revenue recovered using fixed, capacity and variable price components (2021-22)

Customer group	General	Irrigation	Industrial	Large Users	Generation	Total
Fixed	6%	0%	0%	50%	100%	6%
Capacity	0%	100%	100%	50%	0%	51%
Variable	93%	0%	0%	0%	0%	44%

Note: Current fixed price components are \$/day; capacity components are \$/kW/day, \$/kVA/day; and variable components are \$/kWh.

Alignment between prices and costs is critical to network users having the best possible information about the economic costs of network use as new sources of demand growth emerge due to electrification of transport, commercial and industrial processes in response to the carbon budgets set by the Government based on the advice of the Climate Commission. Not aligning prices and economic costs will result in less efficient network management and reductions to consumer welfare.

High level implication of future pricing approach

We believe it is important to signal early any changes to our methodology given the long-term nature of our investments and those of our customers, as may be affected by electricity network pricing approaches.

The impacts of the future pricing approach will differ for each customer load group and each customer. Identifying customer impacts of pricing changes is an action included in the pricing development workplan.

At a high level, the likely impact of transitioning to a pricing structure which has fixed and variable price components which align to the fixed and variable costs of supply for each customer group will be to increase the proportion of revenue recovered through fixed and fixed-like charges and reduce the proportion of revenue recovered through variable charges.

Two decades of significant network investment means the network has on-average significant capacity, with only isolated areas of network congestion which might result in marginal (avoidable) costs which would be reflected in variable charges. As such, most costs recovered through prices are expected to be fixed. This is the approach for the large user, industrial and irrigation customer groups.

The General customer group, however, can expect a gradual rebalancing of the levels of the variable charge and fixed charge, with the level of the variable charge falling and the level of the fixed charge increasing. The implication for these customers is an overall decline in the individual benefit of reducing or avoiding consumption by investing solar panels and batteries. There may continue to be localised benefits from reducing or avoiding consumption depending on the specific network conditions.

Workplan guided by pricing approach

The scope and focus of this workplan is guided by the EA Networks pricing approach.

The pricing approach involves applying six principles when developing pricing structures: Accuracy, Sustainability, Simplicity, Stability, Equity and Transparency. The principles are described in our [Pricing Methodology](#).

The six principles are applied alongside regulatory requirements, particularly the requirements of the Commerce Commission price-quality regulation, Electricity Authority distribution pricing principles, and the Electricity (Low Fixed Charge Tariff Option for Domestic Consumers) Regulations 2004 (Low Fixed Charge Regulations).

The internal and external elements of the pricing approach are broadly complementary, though trade-offs are required between principles, particularly to reflect practical constraints and consumer expectations. The internal and external elements of our pricing approach interact as follows:

- The Accuracy and Sustainability principles guide how we recover the costs of supplying the distribution service taking account of commercial objectives and the maximum revenue allowed by the Commerce Commission.
- The Simplicity, Stability and Equity principles guide decisions on the price components of a pricing structure for each customer group, and the price levels for each component.² Decisions are also guided by the economic efficiency requirements of the Electricity Authority pricing principles a), b) and c).³ Concurrently achieving simplicity, stability, equity, and economic efficiency is not straight-forward and requires trade-offs to reflect relative importance of managing customer impacts of changes to price components and levels, minimising cross-subsidies between and within customer groups, avoiding perverse impacts on customer behaviour and network use, and avoiding high transaction costs of applying a pricing structure. The Low Fixed Charge Regulations materially constrain our pricing options and oblige us to adopt pricing which is not efficient and not equitable.
- The Transparency principle guides our approach to engaging with customers, suppliers and regulators on pricing and providing information on the relationship between pricing structures, costs recovered from each customer group, and how we manage customer impacts. Our engagement and the information we provide align with the information disclosure requirements of the Commerce Commission and the Electricity Authority pricing principle (d).

² Note: a pricing structure has one or more price components. A price component is a charging method, eg, \$/day/connection or \$/kWh/connection consumed. The price level for each price component is the amount charged per unit of time or quantity.

³ Electricity Authority Distribution pricing principles (2019) are available at: <https://www.ea.govt.nz/operations/distribution/pricing/>.

Pricing development activities

The pricing development activities in this workplan have been identified based on current prices and pricing approach and the expected impacts of known regulatory and consumer considerations.

The immediate focus is being ready to respond to the material regulatory changes on the horizon, particularly to the LFC Regulations and adoption of a new TPM, noting the nature and timing of the changes is not currently known. In the longer-term, the focus will shift to future proofing our pricing approach.

The workplan reflects the uncertainty about what may come, identifying near-term activities focused on preparing for pricing changes once more is known about the nature and timing of regulatory and consumer-related changes to the operating context (eg, accelerated electrification and decarbonisation).

Near term pricing activities

Near term pricing development activities involve:

- building understanding of the pricing-related impacts of changes to the regulatory and consumer context factors pricing, and ensuring the capability to respond
- responding to TPM-related pricing impacts
- responding to low fixed charge-related pricing impacts

The desired outcome for the near-term pricing activities is to be ready to quickly implement an appropriate pricing response once there is clarity regarding changes to the LFC Regulations and TPM.

Building understanding and capability

Activity	Timing
<p>Confirm the allocation of fixed and variable costs of supply for each customer group.</p> <p>Purpose is to provide a baseline for assessing the relevance of price components (ie, fixed or variable) for each pricing structure.</p>	Complete during 2021.
<p>Identify the extent of alignment between fixed/variable charges and fixed/variable costs for each customer group.</p> <p>Purpose is to provide a baseline for assessing the relative levels of price components for each pricing structure.</p>	Complete during 2021.
<p>High level review pricing structures for each customer group based on baseline assessment.</p> <p>Purpose is to assess whether pricing structures align with overarching pricing approach given expected changes to regulatory and consumer circumstances. For example, are current charges appropriate given underlying costs? Or are alternative charges (eg, capacity charges, TOU charges) more appropriate?</p>	<p>Complete initial review during 2021.</p> <p><i>Dependency with completing baseline tasks.</i></p>

Low fixed charge-related activities

Activity	Timing
Confirm nature and timing of changes to low fixed charge requirements.	Dependent on timing of Government decisions (monitoring progress).
Identify pricing approach and pricing structure for General load group, particularly the GS20 category, in response to changes to low fixed charge requirements. Purpose is to identify nature and extent of changes to pricing for the General load group to inform transition planning, plus to inform consideration of consequential changes to pricing structures for other load groups.	Begin once Government decision known.
Build customer impact analysis model. Purpose is to provide the capability to assess customer bill impacts of pricing changes, particularly in response to changes to the low fixed charge requirements.	Complete during 2021.
Prepare communication approach and materials for any changes to pricing for the General load group / GS20 category. Purpose is to be ready to tell consumers how EA Networks will respond to a Government decision to revise/remove the low fixed charge.	Develop communications approach prior to Government announcement.

Revision or removal of the LFC Regulations is necessary prior to any further changes to the pricing approach due to the constraint on material rebalancing of the proportions of revenue recovered using fixed and variable charges for the General customer load group, and the flow on implications for pricing for the remaining customer load groups.

The option to transition customers in the General group which are not 'low users' has been discounted as impractical, particularly due to challenge of identifying which of the 15,000 customers currently receiving the low fixed charge meet the relevant criteria. Any change prior to LFC reform could affect stability of prices and confusion with communications to customers. We hope to reform prices once and not as an annual or ongoing exercise. The preferred approach is to rebalance prices for all customers in the GS20 category at the same time.

TPM-related activities

Activity	Timing
Identify impacts of new TPM on costs and pricing for each customer group for 2023/24.	Final TPM design and impacts potentially known by September/October 2021.
Identify options to manage volatility of transmission costs for 2022/23 and subsequent years if new TPM not implemented. Purpose is to identify options to mitigate impact of ongoing volatility in transmission costs from the measurement period commencing 1/9/2022 if the RCPD approach remains in use (or the TPM continues to include charging approaches which cause volatility in transmission costs).	Complete during 2022, if required.

Activity	Timing
<p>Assess implications for EA Networks of forecast transmission investment given new TPM.</p> <p>Purpose is to understand potential transmission costs for the period to 2030 to inform pricing development.</p>	<p>Complete during 2022. Final TPM design and impacts potentially known by September/October 2021</p>

Longer term activities

Longer-term pricing activities relate to more material changes to the pricing approach and pricing structures, particularly in response to accelerated electrification and decarbonisation.

Activity	Timing
<p>Review potential for electrification of commercial, industrial and transport activities on network. Develop understanding of cost implications (including timeframes). Identify options for managing those implications.</p> <p>Purpose is to provide a baseline for the potential 'size' of the network given plausible electrification scenarios to inform role of pricing in network investment and management decisions and consumer investment and network use decisions.</p>	<p>To inform Pricing decisions and Asset management planning - ongoing</p> <p><i>Preliminary assessment completed January 2021.</i></p>
<p>Build understanding of potential consumer price response and of potential implications for EA Networks.</p> <p>Purpose is to inform longer-term pricing development.</p>	<p>Ongoing</p>
<p>Identify pricing approach and pricing structures for all load groups which deliver appropriate price signals given expected changes arising from accelerated electrification and decarbonisation.</p> <p>Purpose is to identify fit-for-purpose price structures, particularly for the irrigation customer load group and generation load group.</p>	<p>TBC - awaiting regulatory changes to be ratified.</p>
<p>Identify pricing approach for load control / demand response / flexibility services. Flexibility is expected to become a more important network management tool due to accelerated electrification. Prices need to reflect the value of the service to avoid perverse investments and network management impacts.</p> <p>Purpose is to confirm alignment between the load control price and the value of the service. The Controlled Energy price does not reflect the value of load control. It is based on a legacy price designed to give a significant discount to the Uncontrolled Energy Price. The difference has never been altered. Price adjustments are applied equally.</p>	<p>TBC – awaiting regulatory changes to be ratified.</p>
<p>Prepare communication approach and materials for any changes to pricing structures.</p> <p>Purpose is to be ready to tell consumers how EA Networks plans to evolve pricing to respond to accelerated electrification and decarbonisation.</p>	<p>Completed annually for any price changes (notice) with ongoing evolution of communications plan for structural changes to pricing.</p>

Capability and resources required to undertake activities

EA Networks has identified the capability and resources required to undertake the near-term and longer-term activities. At a high level, the capability and resources required are:

Indicative assessment of capability and resources for near term activities

Activity	Capability / resource
1. Confirm the allocation of fixed and variable costs of supply for each customer group.	<ul style="list-style-type: none"> • Cost of supply/pricing model module which matches cost components to price components
2. Identify the extent of alignment between fixed/variable charges and fixed/variable costs for each customer group.	<ul style="list-style-type: none"> • Cost of supply/pricing model module which matches cost components to price components
3. Review pricing structures for each customer group based on baseline assessment.	<ul style="list-style-type: none"> • Output of 1 & 2 • Advice on effectiveness of existing price components and options (draw on ENA work) • information on expected customer behaviour & network use (draw on local knowledge, national and international studies) • half-hourly consumption data for each ICP
4. Identify pricing approach and pricing structure to respond to LFC changes and to respond to TPM changes	<ul style="list-style-type: none"> • Output of 3 • Customer impact analysis model • Customer surveys to check direction of travel relative to consumer preferences • Stakeholder consultation to check direction of travel and alignment with emerging industry practice
5. Identify options to manage volatility of transmission costs for 2022/23 and subsequent years if new TPM not implemented.	<ul style="list-style-type: none"> • Advice on options
6. Prepare implementation plan	<ul style="list-style-type: none"> • Consultation with stakeholders on implementation timeframes • Confirm billing system capability • Confirm metering capability
7. Prepare transition plan, including communication approach and materials for any changes to pricing	<ul style="list-style-type: none"> • Output of 4, 5 and 6
8. Assess implications for EA Networks of forecast transmission investment given new TPM.	<ul style="list-style-type: none"> • Ongoing as part of asset management planning process

The capability assessment draws on the experience gained through the Electricity Networks Association (ENA) coordinated work developing new pricing options, and the experience of distributors which have implemented changes to pricing structures.

APPENDIX A: milestones and timeframes

The high-level milestones for the near-term activities are:

Phase 1: building understanding and capability

- Baseline activities. Confirm allocations of fixed costs and variable costs to each customer load group. Identify extent of alignment between cost components and price components
- Review price structures to confirm whether they are fit-for-purpose (ie, signal economic costs)

Phase 2: identify pricing response to LFC and TPM changes

- Assess price structure options
- Engage with community
- Consult with stakeholders
- Develop transition plan

Phase 3: implement pricing response to LFC and TPM changes

- Communicate pricing approach, changes, and impacts to community
- Consult with stakeholders
- Make system changes
- Implement

The indicative milestones and timelines are shown here:

	2021				2022				2023			
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
Phase 1: building understanding and capability												
1. Confirm allocation of fixed & variable costs												
2. Identify alignment between cost components and price components												
3. Assess current price structures												
Phase 2: Identify pricing response to regulatory changes												
1. Assess price structure options					Subject to announcement of timeframes for regulatory changes							
2. Engage with community					Subject to announcement of timeframes for regulatory changes							
3. Consult with stakeholders					Subject to announcement of timeframes for regulatory changes							
4. Develop pricing transition plan					Subject to announcement of timeframes for regulatory changes							
Phase 3: Implement pricing response to regulatory changes												
1. Communicate pricing approach									Subject to timeframes for regulatory changes			
2. Consult with stakeholders									Subject to timeframes for regulatory changes			
3. Make system changes									Subject to timeframes for regulatory changes			
4. Implement									Subject to timeframes for regulatory changes			