

ELECTRICITY DISTRIBUTION BUSINESS PRICING METHODOLOGY

MAINPOWER NEW ZEALAND LIMITED
EFFECTIVE 1 APRIL 2023



mainpower

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1 Introduction and Overview

This section provides a description of the context for MainPower’s pricing for the 2023-2024 financial year. It describes the overall process followed, regulatory drivers, outcomes of consumer consultation, MainPower’s commercial outcomes, pricing objectives and the pricing structures considered.

MainPower’s methodology follows on from the review conducted in 2019 to develop and implement more cost reflective pricing. A key part of the review was to develop a better understanding of its cost to serve at an installation connection point (ICP) level.

Figure 1 below illustrates the overall process that MainPower followed in developing its pricing structure and pricing levels for the 2023-2024 year.

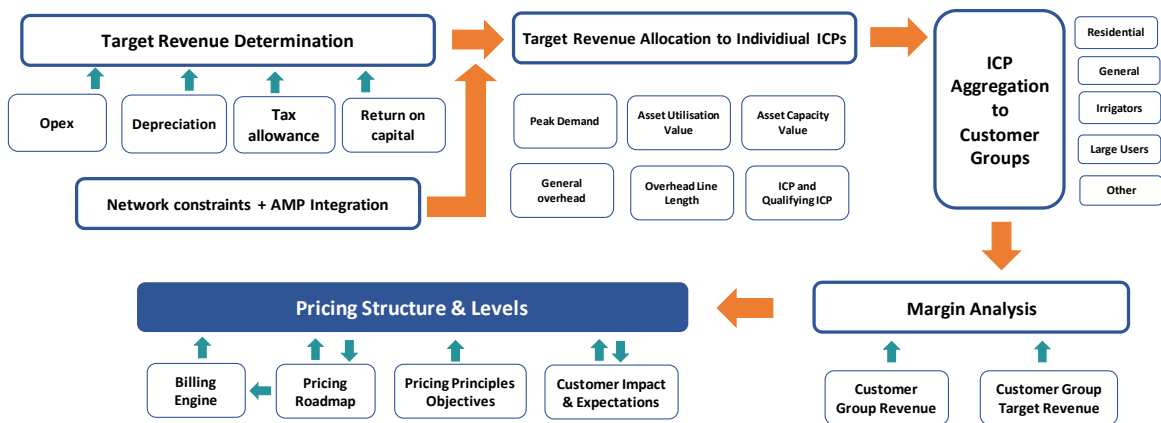


Figure 1 - Price Setting Methodology

1.1 MainPower

MainPower is the electricity lines company for the Waimakariri, Hurunui, and Kaikōura districts. We own, operate and maintain the poles, wires and underground cabling that supply homes and businesses across our network with electricity.

We provide a safe and secure electricity supply to over 43,000 connections, impacting the lives of the 80,000 people that call North Canterbury home. This includes urban centres like Rangiora and Kaiapoi, farmland around Hurunui, a renowned wine country in the Waipara Valley, and tourist hotspots like Hanmer Springs and Kaikōura.

Approximately 83% of the consumer base is residential, with the majority of the remaining being small commercial, farming or irrigation consumers. One large connection is offered non-standard pricing in recognition of its unique cost profile.

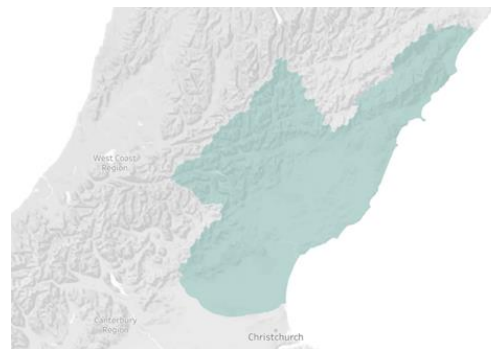


Figure 2 - MainPower’s Electricity Distribution Network Region

MainPower is one of a number of consumer-owned electricity distribution businesses (EDBs) in New Zealand. Consumers in the communities of North Canterbury own MainPower through the MainPower Trust and elect its trustees. MainPower also serves consumers connected to the former Kaiapoi Electricity network who are Non-Qualifying Customers of the company.

The table below outlines some of the key metrics for the network GXPs:

Measure	SBK	KAI	WPR	CUL	ASY	Total
ICPs (000's)	17.8	9.5	6.1	6.5	3.1	43.0
Net Energy* (GWh)	247	128	67	90	92	624

As at 31 March 2022

* subject to electricity market reconciliation

Table 1: Key Metrics for the network GXPs

The table below summarises the main load type and forecast capacity for each GXP in the MainPower supply area:

Location (GXP)	Load Type and forecast capacity adequacy	Implications
Southbrook (SBK)	Makes up about 40% of total MainPower load. Includes Rangiora, Oxford, Pegasus and surrounding area. Pegasus's electricity customers had been transferred from Kaiapoi to Southbrook since 2021. Load is 54% residential and 14% irrigation with the rest being commercial and industrial consumers.	Below 2% population growth forecast, adequate capacity.
Kaiapoi (KAI)	Includes towns of Kaiapoi, Woodend and load is 60% residential. Strong residential growth. 19% of the load is made up of commercial and industrial consumers in the large user group.	Below 2% population growth forecast, adequate capacity.
Waipara (WPR)	Includes township of Amberley. About 18% of load is irrigation. Large Wind farm proposed in this area.	Below 2% population growth forecast.
Culverden (CUL)	Includes towns of Kaikoura, Cheviot, Hanmer Springs and Culverden. About 21% of the load is irrigation.	Below 2% population growth forecast. Network Investment planned in coming years to accommodate irrigation growth.
Ashley (ASY)	Includes one non-standard consumer which makes up about 65% of the total load.	Below 2% population growth forecast.

Table 2: Main load type and forecast capacity for each GXP in the MainPower supply area

1.2 Regulatory Drivers

MainPower's distribution business is subject to the following regulatory controls in respect of pricing:

- Part 4 of the Commerce Act 1986, as administered by the Commerce Commission. Consumer ownership means the company is exempt from direct price control under Part 4. Consumer ownership and oversight provides the necessary incentives to set prices consistent with the purpose of regulation under Part 4, in the long-term interests of consumers;
- Oversight in the form of information disclosures under the Electricity Distribution Information Disclosure Determination 2012 (IDD), including the requirement to publish annual pricing methodologies (being this document);
- Part 6 of the Electricity Industry Participation Code 2010 (Code), relating to the pricing of distributed generation;

- Part 12 of the Code relating to Transmission pricing; and
- The Electricity (Low Fixed Charge Tariff Option for Domestic Consumers) Regulations 2004 (the low fixed charge regulations).

Further, the Electricity Authority (EA) published a revised set of pricing principles in June 2019. These principles were supplemented with Pricing Practice Notes in 2021 and 2022. The updated principles and practice notes were taken into account when preparing the methodology, including the EA's guidance on the pass through of transmission charges. The pricing principles are outlined below and MainPower's consistency with these principles is described in detail in Appendix A.

EA Pricing Principles

1. Prices are to signal the economic costs of service provision, by:
 - being subsidy free (equal to or greater than avoidable costs, and less than or equal to standalone costs);
 - reflecting the differences in network service provided to (or by) consumers;
 - reflecting the impacts of network use on economic costs; and
 - encouraging efficient network alternatives.
2. Where prices that signal economic costs would under-recover target revenues, the shortfall should be made up by prices that least distort network use.
3. Prices should be responsive to the requirements and circumstances of consumers by allowing negotiation to:
 - reflect economic value of service; and
 - enable price-quality trade-offs.
4. Development of prices should be transparent and have regard to transaction costs, consumer impacts and uptake incentives.

Pricing Scorecard

Consistency with these pricing principles is assessed annually by the EA through its Scorecard process. In the 2021 review, MainPower scored a 2.8/5 which places it in the middle of all EDB's scores. In 2022, distribution pricing scorecards were paused to allow EA staff to engage more directly with EDB's and to provide EDB's with time to address the guidance from the second edition of the Distribution Pricing Practice Note in regard to 2023 pricing. The Scorecard process will recommence in 2023 outlining expectations for pricing reform for 2023/2024. The EA has advised that there will be three changes to the Scorecard assessments, these are:

- 1 **Increase the weight of the *Efficiency* measure in the final score (double weighting)**
 - This is intended to re-weight the scorecard assessment in order to recognise actual progress made towards more efficient distribution pricing (as opposed to focus on context and planning).
- 2 **New scoring category: *Progress against Roadmaps***
 - This will indicate through the scoring whether, over time, a distributor is meeting the commitments it has made by turning words into actions.
- 3 **New scoring category: *Progress against Focus Areas* (double weighting)**
 - This will allow the scoring to reflect the extent to which distributors are meeting the Authority's expectations against the five focus areas set out in the recent Open Letter.

Figure 3: Distribution Practice Pricing Note 2022 Focus Areas

1.3 Consumer Consultation and Expectations

MainPower regularly seeks input from consumers regarding price and quality via regular surveys and engagement sessions. This helps inform pricing decisions, as well as objectives for the management of the electricity distribution network.

Key Outcomes

Consumer research and consultation identified that:

- Generally, consumers were supportive of a higher fixed charge and lower variable charge once they understood the largely fixed nature of MainPower’s costs;
- There was concern that low user ICPs would be unfairly impacted by a change in pricing structure to a higher fixed base;
- Generally, all consumer groups are comfortable with some cross-subsidisation regarding pricing levels. ‘Social good’ consideration, indicating a degree of cross-subsidisation between and within consumers was acceptable. Anecdotal evidence suggests around \$50 per year being a tolerable level of subsidy;
- Most consumers find the pricing/tariff structure confusing, even after it is explained to them;
- Most consumers want more clarity from their retailers around what they are paying for e.g. how their bill is split between generation, transmission, distribution etc.; and
- The importance to consumers of keeping price/costs down remains high and satisfaction with keeping price costs down has seen a decline (measurement trend 2017-2022).

General feedback from previous consultation had common themes where consumers had a strong, consistent preference for the status quo but yet an inconsistent preference for the preferred alternative pricing options. Further this preference varied by consumer type:

- Residential consumers – wanted simple, easy to understand pricing structures; and
- Large Users – wanted more flexibility and a combination of pricing methods or structures.

The critical outcome is a bias against complexity, novelty and risk and with a consequent preference for simplicity, familiarity and certainty.

“Not interested, only interested in the actual cost of the bill and if this can be reduced it will be.”

Therefore, improved consumer understanding of the various pricing options needs to be addressed with a suite of supporting strategies and mechanisms to improve consumer awareness.

Summary insights from periodic consumer research indicate that respondents across all consumer groups in the MainPower network view electricity reliability and the cost of electricity, as key performance deliverables are shown below:

Measure of Performance	Importance Rating ¹	Satisfaction Rating ²
Continuity - keeping the power on	95%	93%
Price - keeping costs down	97%	45%
Restoration - reducing the length of time when power is off	86%	86%
Quality - keeping flickering or dimming lights to a minimum	84%	86%
Accessibility - easy to contact my provider, if the need arises	90%	77%
Communication - keeping you informed of the electricity network	90%	82%

¹Measure: Percentage of respondents rating the aspect ‘important’ and ‘very important’ (Customer Pulse FY23).

²Measure: Percentage of respondents rating MainPower’s performance as ‘satisfied’ and ‘very satisfied’ (Customer Pulse FY23).

Table 3: Measure of performance

This suggests that MainPower needs to be mindful of cost and balancing decisions around network investment and the expectation of consumers regarding the price of electricity. There is a cost involved in investment in network maintenance and upgrades that is ultimately reflected in the price consumers pay.

1.4 Commercial Outcomes

Both the structure and pricing levels for the 2023-2024 Financial Year need to reflect several key commercial outcomes for MainPower, namely:

1. Revenue Stability

A portion of MainPower's network load is impacted by seasonal climatic conditions, primarily affecting irrigation as well as the residential segments. This creates volatility in revenue that can be reduced by having a higher proportion of revenue derived from the fixed component of the tariff.

2. Fixed and Variable Revenues aligned with Cost Structure

A significant portion of MainPower's operating costs are fixed, reflecting the sunk costs of its network infrastructure along with the costs of replacing and maintaining those assets. Therefore, MainPower has aligned its revenue streams with its cost structure and now recovers about 67% of revenue from fixed charging.

3. Being Cost Reflective

Considering the EA's directive for network pricing to be more cost reflective, MainPower has sought to align the pricing for each consumer group to the actual cost to serve of each consumer group.

Currently for a standard 8,000 kWh pa consumer there is a difference of \$220 between the controlled and uncontrolled tariff. This represents the benefit to MainPower of the ability to control the hot water demand and reduce the network peak. In future this tariff benefit may need to be allocated to more than solely hot water control.

As new technologies like electric vehicles emerge and impact network congestion then variable price signals will need to be established to reflect this to encourage usage away from peak times. This would be done via a combination of pricing and demand side management load control. This would encourage consumers to shift their energy usage without creating additional peak issues and have the longer-term benefit of delaying network investment.

4. Reduce Cross Subsidisation

Due to the historical (pre-2020), uniformly applied variable charge-based pricing structure, legacy imbalances in the revenue versus cost to serve within and between consumer groups still exist. Historically, higher volume consumers would have paid disproportionately more than lower volume users.

Whilst focus groups have indicated a degree of acceptance of this, MainPower has committed to reduce these imbalances over time and cross subsidisation has been minimised by rebalancing prices so that a higher proportion of revenue is derived from the fixed price component. A proportion of this imbalance remains in the residential segment largely due to the historic low user fixed charge regulations. This will largely be resolved through the phase out of the low fixed charge regulations in the period from 1 April 2022 to 1 April 2027.

1.5 Asset Management Plan (AMP)

MainPower's pricing methodology is designed to support and help deliver on its AMP. The AMP supports MainPower's strategic intent of *Creating a smarter future to deliver local value* and specifically *Leading the transition to smarter networks of the future*. This is underpinned by a focus on strategic asset management and operational excellence which requires sufficient funding to implement effectively. Network planning is a function of meeting defined performance and service standards in the network:

- Capacity,
- Power Quality,
- Security, and
- Reliability

The pricing methodology therefore considers particular network capacity issues that may exist or are emerging. These capacity issues can either be in a particular location or at a particular time of day. MainPower considers the current and future use of non-network solutions, load control and price signals through tariff differentials for controllable load to address existing and forecast capacity constraints. To date, existing and forecast capacity constraints have, other than through hot water ripple control, largely been managed through the network standards and network reinforcement and development projects. Figure 4 below illustrates how this process works:

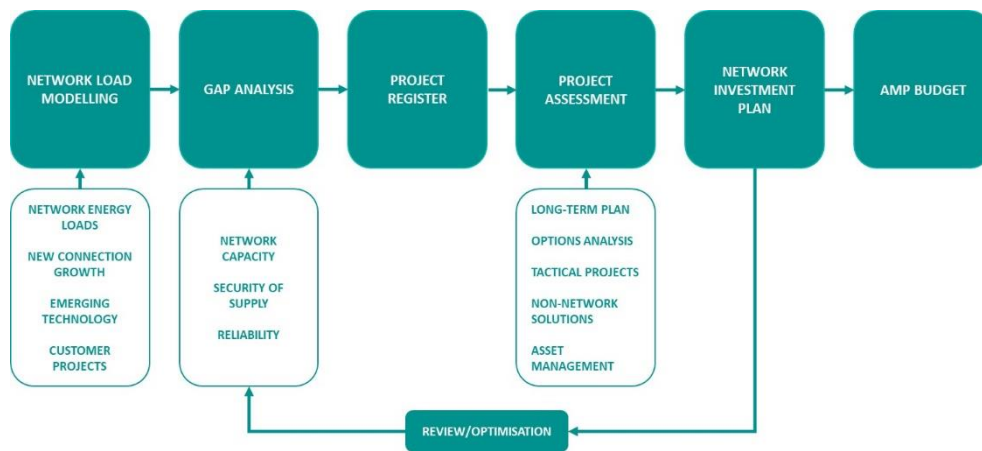


Figure 4: Asset Distribution Network Development

The pricing methodology, as outlined in this document, will generate sufficient revenue for the AMP budget and ensure the development, maintenance and replacement of the electricity distribution network, meeting MainPower’s performance standards which reflect consumer expectations.

1.6 MainPower’s Pricing Objectives

Given these regulatory and commercial drivers as well as consumer expectations, MainPower has tailored a set of six pricing objectives which will underpin the development and introduction of future pricing structures as well as pricing levels:

- Objective 1* - Alignment between cost structure and tariff structure (sunk-future costs vs fixed-variable revenue)
- Objective 2* - Minimise cross subsidisation between consumer groups
- Objective 3* - Minimise cross subsidisation within consumer groups
- Objective 4* - Consistency with regulatory environment (incl. EA pricing principles)
- Objective 5* - Is consistent with the values of the ownership structure (consumer owned)
- Objective 6* - Does not erode MainPower’s brand / relationship with its consumers

1.7 Cost to Serve

Fundamental to achieving its pricing objectives (particularly objectives 1-4), MainPower developed a new method of allocating costs to each ICP on its network. This information provided MainPower a basis to align its cost and pricing structures as well as to address cross subsidisation amongst consumer groups. Details of this new method are described in section 3.2.

1.8 Pricing Structure

Pre-2020 Pricing Structure

MainPower had applied a uniform variable charge to all pricing options within a particular pricing region, irrespective of consumer density, location, network configuration, or other load characteristics. Variable prices, after the disbursement of rebates, were generally the same for consumers in both MainPower and Kaiapoi pricing regions. Further, a significant portion of MainPower’s revenue was generated from the variable component as illustrated in Figure 5 showing the revenue portions for a residential consumer (8,000kWh pa).



Figure 5: Pre-2020 Pricing Structure

Post-2020 Pricing Structure

When considering what future pricing structures MainPower could implement, four possible options were identified:

1. Capacity (zoned) + fixed charge
2. TOU + fixed charge
3. Static critical peak + fixed charge
4. Dynamic critical peak + fixed charge (reactive peak charging to prior activity)

Assessment criteria were then developed to enable the evaluation of different structures:

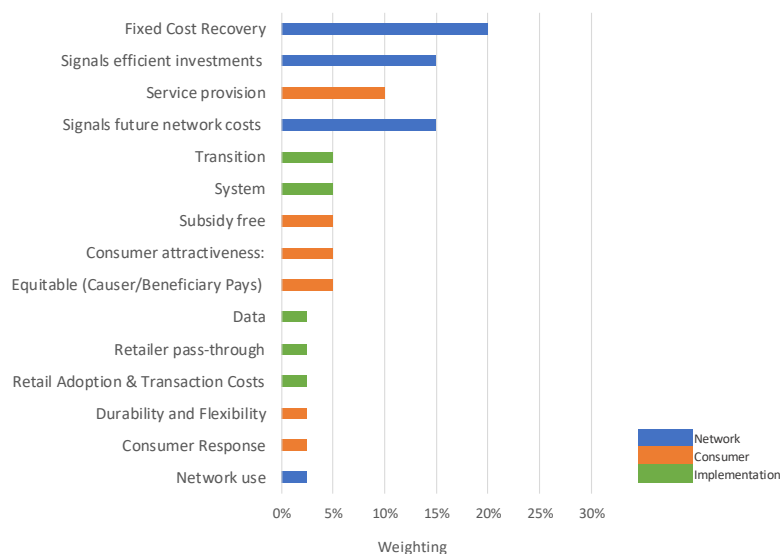


Figure 6: Pricing Structures Assessment Criteria

These assessment criteria were weighted in terms of importance and grouped into three categories of consumer impact, network benefit and implementation ease.

The above four pricing structures plus an additional two (the then current structure and a rebalanced version of the then current structure) were scored against the assessment criteria to identify the preferred and probable structures that MainPower could implement.

The results, which were common across all consumer groups are shown below:

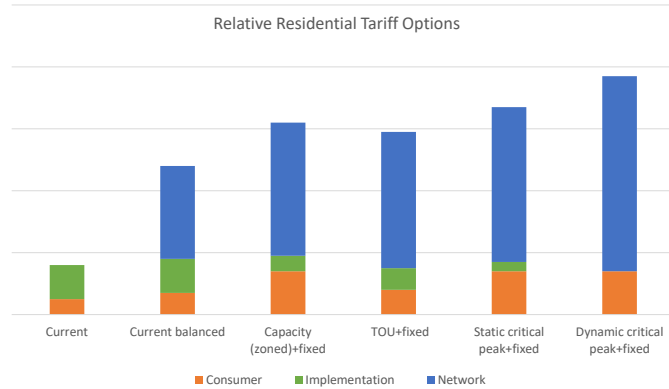


Figure 7: Pricing Structure Results

The *Current Balanced*¹ option was chosen on the basis of:

1. Significant improvements on delivery of network orientated benefits could be achieved by making the relatively simple adjustment of rebalancing the fixed and variable components;
2. Difficulty of implementation is a significant barrier to the introduction of individually tailored cost reflective pricing. For example, those options that included dynamic elements;
3. The lack of data availability is considered a barrier to the introduction of individually tailored cost reflective pricing, particularly ½ hourly consumption data; and
4. Consumer impact is an important consideration in determining the rate of change to pricing structures but conversely the impact may be less clear given the final price delivery passes through current retailer billing structures.

Over the current regulatory control period MainPower intends to transition from the *Current Balanced* structure to alternate options, dependant on a range of criteria, particularly the availability of ½ hourly data as illustrated in Figure 8 below:

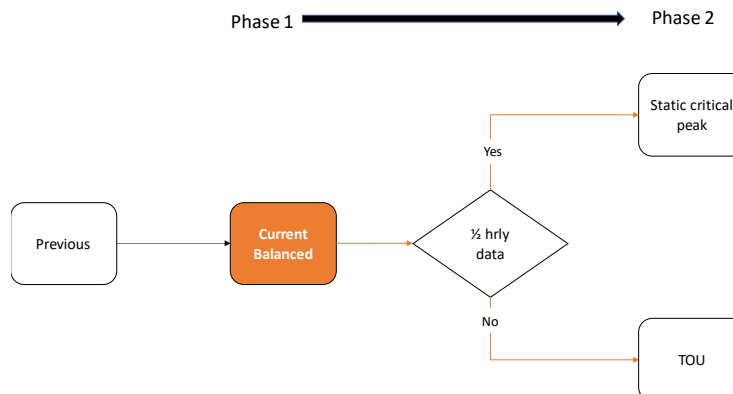


Figure 8: Price Structure Development

¹ Describes the broad, existing pricing structure but with progressive balancing of revenue between and within consumer groups.

While other options will continue to be assessed, static critical peak pricing is regarded as a preferred next phase of pricing development for MainPower. Static critical peak is a closer representation of the true economic cost of service provision but will need to be underpinned by a greater understanding of demand patterns on a temporal and locational basis. With 87% of MainPower’s consumers having a smart meter there will be a basis to identify pre-set congestion periods and what each consumer group is contributing to them.

Analysis to date of the difference in cost of supply across the ICP population did not have a strong correlation with location, relative to consumer type and in particular peak demand characteristics. For example, demand characteristics across the residential consumer group has a much stronger correlation with cost of supply than does location, including high / low density areas. As such locational base pricing is not, at this stage, considered necessary.

Notwithstanding the lack of acute constraints across the MainPower network, the lack of ½ hourly consumption data makes it problematic to identify specific consumer groups having particular consumption patterns (driving network constraints) with targeted price signals.

Furthermore, our consumer consultation has supported a simple pricing structure where a degree of cross-subsidisation is acceptable.

2 Cost Determination

2.1 Incremental Cost Determination

Incremental costs are regarded as those that are variable in nature and result from an increase in capacity requirements for existing connections or from new connections to the network. MainPower approaches incremental cost determination and recovery in two ways:

1. Capital contributions specifically target new connections or an increase in capacity for existing connections by determining the uneconomic portion of capital expenditure (which won’t be recovered through standard network pricing). This is then charged to the consumer.
2. As part of identifying the economic costs of building and operating the network, a significant portion of network expenditure is ‘traced’ (section 3.2) to each ICP and consumer group. Prices are set for each group to reflect not only the physical assets they use but also on the use (peak demand) placed on these assets.

2.2 Residual Costs Determination and Allocation

Applying MainPower’s cost allocation methodology ensures the vast majority of costs are allocated out (on an ICP-by-ICP basis). The remaining residual costs, which generally reflect cost types that are fixed or the portion of costs that are fixed are then attributed to each ICP based on the allocation methodologies described in Section 3.2.

3 Target Revenue

MainPower’s target revenue is determined by the following building blocks:

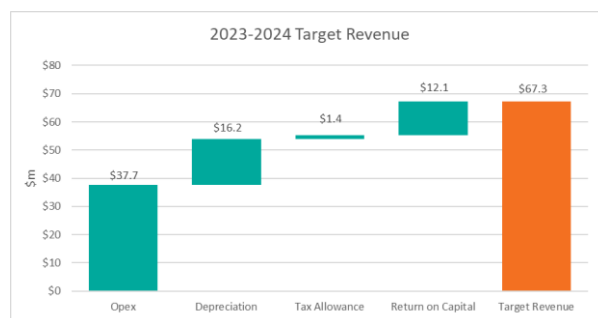


Figure 9: Target Revenue 2023-2024

	2023-24 (\$m)	2022-23 (\$m)	Change (%)
Operating Expenditure	37.7	34.7	9%
Depreciation	16.2	15.0	8%
Tax Allowance	1.4	1.2	21%
Return on Capital Allowance	12.1	11.0	10%
Total of building blocks (Target Revenue)	67.3	61.9	9%

Table 4: Target Revenue by Building Block

For the 2023-2024 Financial Year MainPower has set its target revenue to equate to a 100% of the building block total. This includes a target WACC return of 4.27% which reflects the cost of capital applied by the Commerce Commission to EDBs regulated under the Default Price-Quality Path.

The following sections provide detail on how the building blocks were calculated:

Operating Expenditure

	2023-24 (\$m)	2022-23 (\$m)	Change (%)
Administration & Support Costs	15.1	14.3	6%
Operations and Maintenance	10.5	7.0	50%
Transmission Cost	12.0	13.4	-10%
Total	37.7	34.7	9%

Table 5: Operating Expenditure by Category

Administration and Support Costs

Includes costs associated with managing the day-to-day business activities of the distribution business, such as management, accounting, regulatory, strategy and administration costs. This also includes local body rates and Electricity Industry Act and Commerce Act levies. Field services overheads have seen the most significant area of increased costs. For a number of cost items, adjustments are made to account for non-network costs by reducing directors, staff, office and consultant costs.

Operations and Maintenance

Captures costs associated with operating and maintaining the network, such as switching, planned and reactive maintenance and responding to faults. The increase in this expenditure is due in part to a change in accounting treatment for some network expenditure. These costs are also forecast to be consistent with planned maintenance expenditure identified in the AMP.

Transmission Costs

Transpower charges associated with:

1. connection of MainPower's distribution network to the national grid (including connection, benefit-based, residual, transitional cap, and new investment contract charges).
2. the grid system operator function (a service which Transpower provides).

In 2022, the EA adopted a new transmission pricing methodology. This methodology retains the connection charge for assets used to directly connect MainPower to the Grid and new investment charges to recover investments in the Grid triggered by MainPower. The previous interconnection charge is replaced with a benefits-based charge and residual charge. The benefits-based charge is used to recover seven large historic investments by Transpower and any Transpower assets commissioned after 2019 which MainPower as a transmission customer is deemed to benefit from. The residual charge is used to recover Transpower's remaining costs. It is allocated based on historic demand. Over time the residual charge is likely to decrease, and the benefits-based charge will increase as Transpower undertakes more investment.

The change in transmission pricing methodology also requires a change in the methodology for allocation of the settlement residue (SRAM) in the wholesale market. Previously Transpower paid any residue to its transmission customers as a loss constraint excess based on the customers' contribution to the Regional Coincident Peak (RCPD). From 1 April 2023 any residue will be allocated on the same basis as the benefits-based charge. The EA has also directed that on a monthly basis distributors are to pass the SRAM payments to the electricity retailers and other customers directly invoiced by the distributor as distribution customers. MainPower has incorporated an estimate of the SRAM payment credit into its transmission pass-through charges based on a historic 5-year rolling average. In addition, MainPower will undertake a washup exercise each month and distribute any excess SRAM credit to the electricity retailers in proportion to the level of transmission pass-through charges paid by the retailers. The retailers are then required to pass this through to its customers.

The old and new transmission charge pricing is set out in Table 6.

	2023-24 (\$m) Benefits Based	2022-23 (\$m) RCPD Based	Change (\$m)
Interconnection		10.3	
Connection	2.7	2.9	
Benefit Based Charges	1.9		
Residual	7.2		
Transitional Cap	0.0		
New Investment	1.2	1.1	
Gross Transmission Charge	13.0	14.3	(1.3)
Loss Constraints Excess / SRAM credit– Estimate Netted Off	(0.9)	(0.8)	(0.1)
Net Transmission Passed Through	12.0	13.4	(1.4)

Table 6: Transmission Costs

Transpower's overall transmission charge in the 2023-2024 financial year has decreased by 10%. The decrease is due to the implementation of the new Transmission Pricing Methodology.

MainPower passes the transmission costs through to consumers and therefore the transmission component of MainPower's prices will decrease in the 2023-2024 year.

Under the new transmission pricing methodology almost all of the transmission charges are now deemed to be more fixed than variable in nature. Both transmission fixed and variable charges are determined for each ICP and aggregated to a consumer group in proportion to the total transmission cost apportioned to it.

Consumer Group	2023-24 (\$m)	2022-23 (\$m)
Residential	5.69	6.20
Irrigators	1.97	2.67
Large Users	2.23	2.17
General (commercial)	1.90	2.08

Consumer Group	2023-24 (\$m)	2022-23 (\$m)
Other	0.25	0.29
Total	12.0	13.4

Table 7: Transmission Costs by Consumer Group

Depreciation

Represents the return of capital investment and is calculated by a straight-line basis using a standard life for the asset in accordance with IDD. The increase in depreciation in 2023-2024 year is due to an increase in the value of the Regulatory Asset Base (RAB) including fast depreciation assets being added in recent years.

Return on Capital Allowance

This is calculated on a WACC return on the forecast RAB value as at 31 March 2022. MainPower has used a post-tax (67% percentile) WACC estimate of 4.27% which reflects the cost of capital applied by the Commerce Commission to EDBs regulated under the Default Price-Quality Path. The increase in return in capital allowance in 20223-2024-23 year is due to an increase in the value of the RAB due to increased capital investment (including completion of major projects such as the new Southbrook substation).

Tax Allowance

The regulatory tax allowance is calculated as the tax payable on the calculated return on capital adjusted for the rebate paid to qualifying consumers.

3.1 Consumer Groups

MainPower's standard prices are structured across seven standard consumer groups. It also has one non-standard consumer which is direct billed.

Group	Description
Residential	<p>A residential consumer group has been adopted to show compliance with the low fixed charge regulations, which apply only to residential consumers. The low user fixed charges are being phased out by increasing the regulated daily rate by \$0.30/day every year until April 2027 when the low user fixed charge regulations are revoked. The increase per day is split evenly between retailers and distributors so each year distributors can increase the low user daily charge by \$0.15/day.</p> <p>MainPower applies different pricing for controllable load (MainPower uses ripple control to control load (generally residential hot water) and this aids MainPower in managing network peaks. For a domestic consumer using 8,000 kWh per year this difference is \$220.</p>
Non-residential and large users	<p>Non-residential and large users are treated as a separate consumer group in order to:</p> <ul style="list-style-type: none"> ○ recognise the different connection load usage profiles of these consumers (e.g. lower weighted average load factor), relative to residential consumers and ○ facilitate our approach to complying with the low fixed charge regulations (i.e. by separating residential and non-residential consumers)
Irrigation	<p>This group recognises the unique summer demand peaking load profile of these consumers and incentivises efficient utilisation of available capacity in the network.</p>
Lighting	<p>This group recognises the distinct night-time only usage profile and dedicated assets attributable to lighting connections.</p>
Council Pumping	<p>Council pumping is a separate consumer group that recognises their high peak load but less frequent use.</p>

Group	Description
Temporary supply	This consumer group recognises the need for temporary supply connections (e.g. related to construction) as well as the additional costs associated with servicing this group.

Table 8: Consumer Groups

3.2 Allocation Methodologies

To identify the cost to serve, of its consumer groups, MainPower relies upon ways to allocate or distribute costs out to each individual ICP according to its individual characteristics / profile. The following section describes these key methods.

MainPower has identified nine potential cost allocation methodologies to allow different category of costs to be distributed to particular groups of ICPs. This allows an ICP with higher requirements for either assets or other network resources to receive a higher portion of the total cost.

Peak Demand, Asset Utilisation Value and General methodologies determine how over 96% of MainPower costs are allocated and are described in detail below:

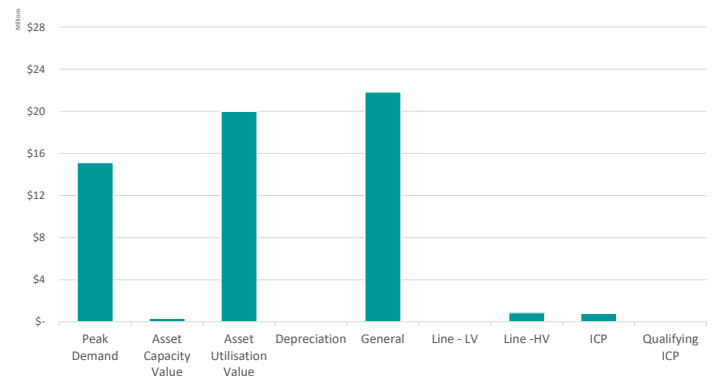


Figure 10: Cost via Allocation Method

Allocator	Cost Component	Methods
Peak Demand	Transpower Costs Depreciation (10%) Regulatory return (10%) Tax (10%)	The source data used was a set of half hourly anonymised data of about 8,000 consumers on the MainPower network. From this a peak demand 'metric' was constructed (an average of the 20 highest day, 2 hr average peaks) to represent peak consumption behaviour at each ICP.
Asset Utilisation Value	Network Fault Costs Rates Costs Network Assets (BI and MD) Depreciation (70%) Regulatory Return (70%) Tax (70%)	<i>Asset value</i> is a key metric that underpins MainPower's cost to serve analysis. MainPower conducts a GXP-ICP asset trace to identify all the assets that supported service delivery to each ICP. Following this, the asset value is apportioned to each ICP via its relative contribution to the overall peak contribution of the group of ICPs sharing that particular asset. Figure 11 below illustrates the number (141) and types of assets supporting a particular ICP. Of the total value of these asset of \$5.4m, \$943 is attributed to this ICP.
General	Administration Costs Other Maintenance Electricity Costs Depreciation (20%) Regulatory Return (20%) Tax (20%)	A number of administration, network operation and maintenance costs are allocated to each ICP via the <i>General</i> allocator. This approach is based on the assumption that these costs are best distributed in proportion to the time spent by MainPower on the main consumer groups. The relative amount of staff time spent on each consumer groups is used as a proxy for the cost of serving each group. The Network and Operations departments are used as the determinants for the time allocation of MainPower staff, with the other enabling functions (e.g. HR, Finance and I.T) following in the same proportions.

Table 9: Allocation Method

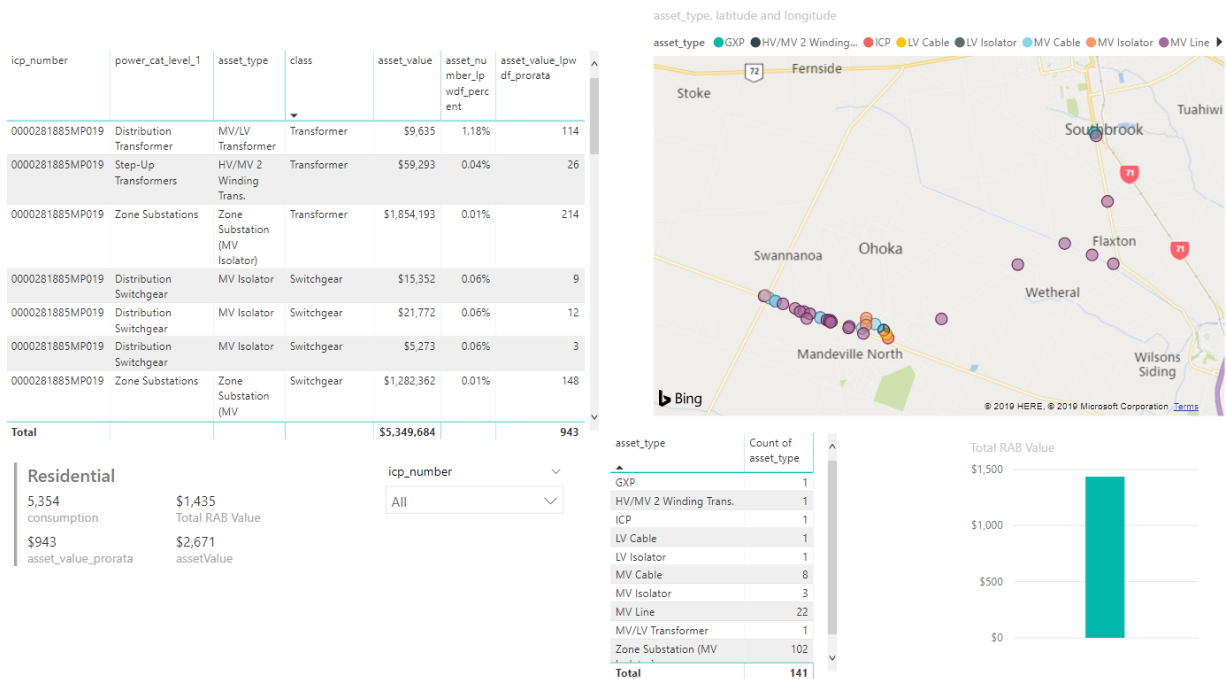


Figure 11: Asset ICP Relationship

4 Strategic Pricing Implementation

4.1 Background

For MainPower to deliver on its pricing objectives, it developed a phased development and implementation plan or Roadmap. The purpose of the roadmap is to manage the transition of the pricing structures and pricing levels cognisant of industry and regulatory developments, consumer impact and the resource required to implement. The key themes of this pricing strategy are:

1. Alignment of revenue to cost structure
2. Rebalancing between consumer groups
3. Preparing for emerging technologies

Each of these themes have a number of outcomes that will be achieved during each regulatory control period (RCP). The Pricing Road map illustrates this in more detail.

During the first year of the RCP 2020-21 (P1), MainPower delivered:

Outcome	Description
Revenue stability	Fixed and variable revenue components aligned with fixed and variable cost structure of the network business.
Reduce cross-subsidisation	First phase of the rebalancing of the revenue between consumer groups (to reduce cross-subsidisation) over a 4-year period.
Simplify and consolidate	MainPower’s pricing structure has been simplified by removing the Kaiapoi pricing region (reducing the number of pricing codes by 50%).

Table 10: Regulatory Control Period 2020-2021

During the second year of the RCP 2021-22 (P2), MainPower delivered:

Outcome	Description
Reduce cross-subsidisation	Second phase of the rebalancing of the revenue between consumer groups (to reduce cross-subsidisation) over a 4-year period.
Evolve to reflect emerging technologies	Continuously monitor and review the uptake rates of distributed generation and other emerging technologies such as electric vehicle charging across the network and across consumer groups.
AMP-pricing interdependency	A phased reduction of the rebate to align with the long-term capital investment requirements of the AMP.

Table 11: Regulatory Control Period 2021-2022

During the third year of the RCP 2022-2023 (P3), MainPower delivered:

Outcome	Description
AMP- pricing interdependencies	Achieved closer integration with the AMP, particularly around total spend and terminal RAB value for each regulatory period. Continued the phased reduction of the rebate to align with the long-term capital investment requirements of the AMP.
Reduce cross-subsidisation	Achieved the third phase of the rebalancing of the revenue between consumer groups (to reduce cross-subsidisation). The decision to phase out low user tariffs by 1 April 2027 will allow elimination of the cross-subsidisation within the residential consumer group over this phase out period.
Evolve to reflect emerging technologies.	An EV tariff add-on was introduced for capturing the uptake and demand requirements of electric vehicles across the network. This pricing component also provides a future mechanism to deliver pricing signals for EV load. Continued to monitor and review trends in the uptake of distributed generation and other emerging technologies. A billing system criteria evaluation and RFI was completed to ensure a future flexible platform to meet requirements in delivering future tariffs.
Evolve to reflect temporal and locational constraints.	It was determined that Time of Use and Location base pricing was not warranted for P4, particularly until the full impact from the change in transmission pricing methodology and removal of the RCPD is clear. MainPower will continue to monitor developments on its network to ensure ability to respond as and when required.

Table 12: Regulatory Control Period 2022-2023

During the fourth year of the RCP 2023--24 (P4), MainPower will deliver:

Outcome	Description
AMP- pricing interdependency	<p>Phased reduction of the rebate will be paused in P4 to manage the overall impact of pricing changes on consumers. The phased reduction is expected to resume in P5.</p> <p>The Capital Contributions Methodology will be updated in conjunction with this period's Pricing Methodology.</p>
Reduce cross-subsidisation	<p>Rebalancing of the revenue between consumer groups (to reduce cross-subsidisation) continues in P4 and will now extend into P5.</p>
Evolve to reflect emerging technologies.	<p>Having introduced an EV tariff, continue to encourage retailers to apply the EV tariff where applicable to provide better visibility of EV's in the Network.</p> <p>MainPower will proceed with one of these options identified in its evaluation of billing systems in the 2023-24 year. The implementation of a new billing system allows MainPower to consider use of more flexible pricing structures as may be required in the future.</p> <p>Development of a Demand Side Management (DSM) strategy will continue as further investigation is undertaken to explore how MainPower can best respond to emerging technologies and enable greater customer choice.</p> <p>Update the customer connection agreement and network connection standards in conjunction with the review of the use of system agreement with electricity retailers. Proposed changes include requirements for customers to notify MainPower when an EV charger above a certain capacity has been installed.</p>
Evolve to reflect temporal & locational constraints.	<p>Linked to the AMP pricing interdependency looking to target specific locational and time constraints across the network and developing pricing to address any issues were appropriate. Development of the DSM strategy will assess future options for hot water ripple control and other flexible demand side responses at a network level. Options for pricing signals will be informed by the DSM strategy.</p>

Table 13: Regulatory Control Period 2023-2024

4.2 Rebalancing between consumer groups

The balance between costs and revenues in each of MainPower's consumer groups is uneven and correction of this is an important consideration in the Roadmap (below). Currently this imbalance varies between -\$4.8m and \$2.2m.

4.3 Roadmap

Figure 12 below is a summary of MainPower’s pricing strategy (Roadmap).

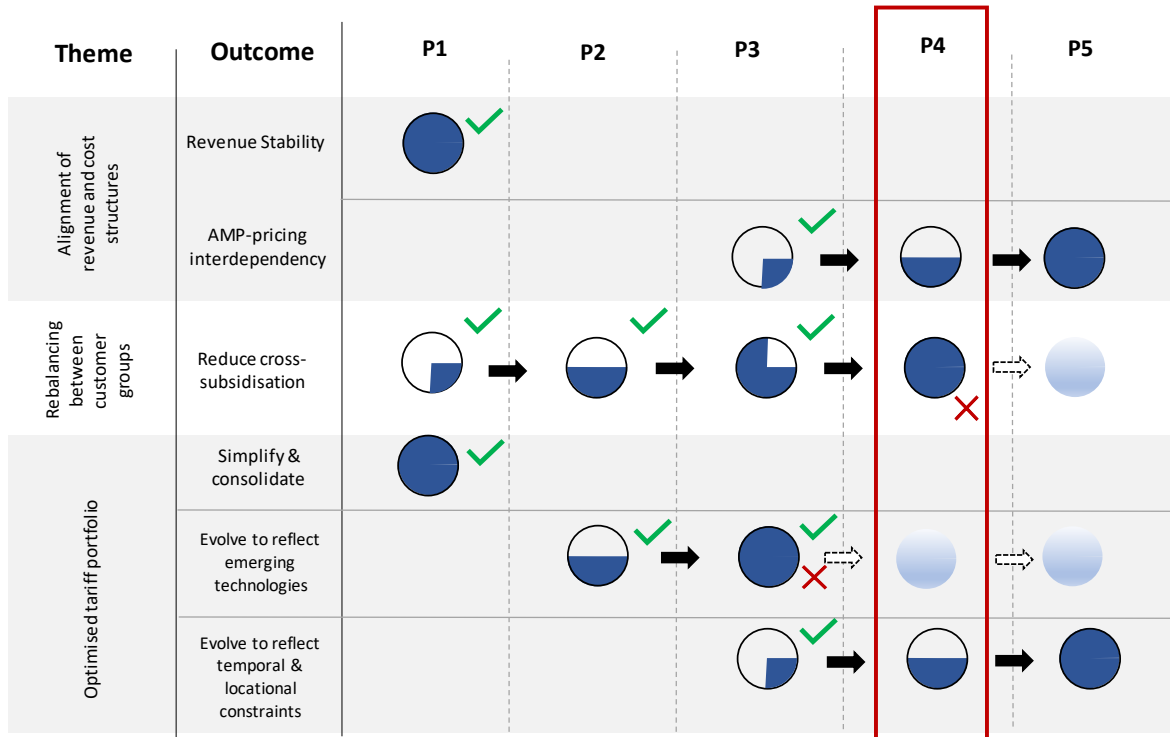


Figure 12: Pricing Roadmap Consumer Group Revenues

4.4 Consumer Group Revenue

Forecast Consumption

For the 2023-2024 year, the forecast consumption across MainPower’s network is 639 GWh. This represents an average consumption year and is underpinned by the following assumptions:

1. Climatic conditions - average summer temperature and average winter temperature
2. New connections - forecast new connections at 1,011
3. Irrigation - total irrigation consumption of 81 GWh

Rebate/ Discount

Rebates are paid to Redeemable Preference Shareholders (Qualifying Customers) of MainPower. Rebates are paid as a credit to Qualifying Customers via the electricity retailers on a monthly basis (although retailers may choose not to show the rebate separately on consumers electricity bills).

The rebate scheme for 2023-2024 year will continue as a percentage discount off the fixed charge. A discount is applied to consumers connected to the former Kaiapoi Electricity network to maintain parity as required by the sale and purchase agreement at the time MainPower acquired the Kaiapoi Electricity network. For residential consumers the rebate rate is 19.9% and for non-residential consumers the rebate rate is 7.4%.

Consumer Group	Rebate (\$m)
Residential	4.26
Irrigators	0.14

Consumer Group	Rebate (\$m)
Large Users	0.03
General (commercial)	0.56
Other	0.02
Total	\$5.0m

Table 14: Rebate by Consumer Group

Consumer Group Revenue

The following revenue targets for each of the main consumer groups were set based on the target revenue and the allocation methodology described earlier. A further adjustment was made to each consumer group's revenue target consistent with MainPower's phased implementation of its pricing strategy.

Consumer Group	2023-24(\$m)	2022-23(\$m)
Residential	39.6	35.1
Irrigators	7.9	8.1
Large Users	3.5	3.7
General (commercial)	13.4	12.3
Direct Supply	1.8	1.6
Other	1.1	1.0
Total	67.3	61.9

Table 15: Consumer Group Revenue

Note: Does not include rebate/discount

4.5 Pricing Structure

The table below outlines the pricing options that MainPower offers its consumers. In 2023-2024 year, these options are common and available to consumers in both the Kaiapoi and MainPower areas of the network.

Pricing Option	Consumer Group	Description and rationale
Residential All-Inclusive Supply	Residential	A price option offered to residential consumers that allows a portion of their load (i.e. hot water heating) to be interrupted for part of the day as required for network operations. This option is priced lower than the uncontrolled price to incentivise consumers to offer controllable load. This lower price recognises the benefits to all consumers by being able to reduce load to manage faults and in reducing peak demand related costs. This is offered as a low user and standard user option with both resulting in an equivalent annual cost to consumers using 8,000kWh pa (thus complying with the low fixed charge regulations).
Residential Uncontrolled Supply	Residential	A pricing option targeted to residential consumers that do not offer controllable load (i.e. water heating). The pricing of this option recognises the additional network costs created by not being able to reduce load to manage faults and peak demand. This price is offered as a low user and standard user option. The variable component is approximately triple the <i>Residential All Inclusive Supply</i> variable price. The fixed rates for both transmission and distribution components are largely equivalent to the <i>Residential All-Inclusive</i> supply.
Residential Night Only	Residential	A special discounted pricing option which applies to consumption during the off-peak night period between 9.30pm to 7.30am. This incentivises consumers to shift load to the off-peak night period, recognising the associated benefits in reducing peak demand. This is offered as a low user and standard user option at \$0.0122/kWh reduction of the <i>Residential All Inclusive</i> supply variable price.
Low User fixed charge		The fixed charge component is set at 45c/day for all low user options this approach complies with the low fixed charge regulations.
Large User Group	Large Users	This pricing option reflects the costs associated with the significant asset capacity made available for consumers who use more than 500,000kWh/pa. Each Large User has a specific variable charge applied to it. The variable rate reflects the usage with higher users paying a lower rate. A uniform fixed daily rate is applied to all Large Users.
Non-Residential General Supply	Non-residential	General consumers pricing option reflect the uncontrolled nature of load which cannot be interrupted.
Irrigation	Irrigation	These consumers are charged a fixed daily charge per kW of installed motor capacity connected. This recognises the relationship between network capacity costs and the varied size of irrigation motors connected to the network.
Lighting	Lighting	A fixed daily charge per fitting applies to <i>Street Lighting</i> pricing options. This reflects the fixed nature of the costs associated with street lighting infrastructure. A fixed component was added to the streetlight price in 2018 and in 2021-2022 lighting was moved to a 100% fixed structure. Right of way lighting and under verandah lighting are included as optional components for other price categories. The price has been set to reflect the lower maintenance requirements associated with both under verandah and right of way lighting. These charges remain variable reflecting their optional component nature.
Council Pumping	Council Pumping	A price offered for connection of Council pumping facilities reflects the fixed nature of costs for this consumer group.
Temporary supply	Temporary Supply	A pricing option applying to temporary connections to the network. Priced higher than standard supply, this option recognises the additional costs in managing temporary connections. It also appropriately incentivises consumers to shift to a standard pricing option as soon as is practical. In 2023-24 this has moved to a 100% fixed structure.

Table 16: Pricing Structure

Further to the additional pricing components of under veranda lighting, right of way lighting, distributed generation and EV component has been made available.

4.6 Pricing Levels

The transmission and distribution costs for each of the consumer groups are used as determinants for the fixed and variable charges (prices). These are calculated based on MainPower’s forecast consumption and number of connections in each of the consumer groups.

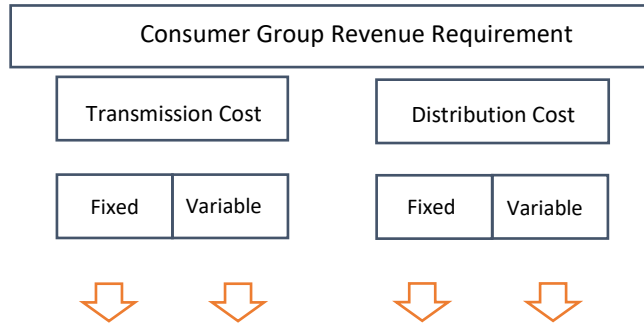


Figure 13: Fixed v Variable Pricing Levels

Transmission

Transmission revenue is collected via both the fixed and variable charges. Where possible and in most cases transmission charges are passed-through via fixed charge pricing. Due to low user fixed charge restrictions, transmission cost is passed through for Residential Low Users via the variable pricing component.

Consumer Group	Fixed (\$m)	Variable (\$m)
Residential	4.6	1.1
Irrigators	2.0	0.0
Large Users	0.7	0.0
Direct Supply	1.5	0.0
General (commercial)	1.9	0.0
Other	0.3	0.0
Total	11.0	1.1

Table 17: Transmission Pass-through Revenue

Appendix D provides the transmission pricing for all price categories.

Distribution

Both the fixed and variable distribution charges are determined for each consumer group in proportion to the distribution cost apportioned to it.

Consumer Group	Fixed (\$m)	Variable (\$m)
Residential	21.6	12.4
Irrigators	3.6	2.3
Large Users	1.1	1.6
Direct Supply	0.3	0.0
General (commercial)	7.9	3.6
Other	0.6	0.3
Total	35.1	20.2

Note: Does not include rebate/discount. Table 18: Distribution Revenue

Appendix D provides the distribution pricing for all price categories.

Standard pricing

The cost impact (post rebate) on the average consumer in the residential consumer group is:

2023-24 (\$/yr)	2022-23 (\$/yr)	Change
951	855	+11.2%

Table 19: Standard Pricing Average Residential Consumer

Non-Standard Pricing

One non-standard consumer is connected to MainPower's distribution network. The consumer is situated close to a Transpower GXP and takes direct supply from the grid through MainPower's connection assets and equipment.

Prices are set for this consumer to recover the actual costs MainPower incur as follows:

Cost type	Recovery	Comment
Transmission	Direct pass-through	Based on a separately metered feed from the GXP to a non-standard consumer connected to the GXP based on assets and contribution to benefits-based charge and residual charge from Transpower.
Distribution	Fixed distribution charge	Distribution asset and equipment costs deployed at the connection (which have not already been recovered through capital contributions) are recovered fully through prices. This includes depreciation and a return on investment as well as line losses.
Operations & Maintenance	Fixed distribution charge	Costs are directly recovered through pricing.
Administration	Fixed distribution charge	Costs are directly recovered through pricing.

Table 20: Non-Standard Pricing

Prices have been determined on this basis to discourage uneconomic bypass to the transmission grid. The fixed price seeks to minimise price volatility for both parties. Target revenues expected to be recovered from non-standard consumers are detailed in Appendix E.

MainPower’s obligations and responsibilities in the event of an interruption to this consumer are no different to that of other large standard consumers connected to our network. The consumer does have a higher level of circuit redundancy built into their connection that could result in quicker restoration times but the obligations and responsibilities to restore supply are no different. This level of redundancy is reflected in prices through the higher associated cost of the connection assets and equipment.

MainPower will consider all requests for non-standard contracts on application based on the commercial merits of the proposal. Criteria by which we typically might decide to enter into a non-standard contract include:

- the consumer is at risk of bypassing the network to an alternative network or energy source.
- the consumer has requested a non-standard connection or specialist equipment which cannot be accommodated into our standard pricing structures or capital contributions methodology.
- the consumer requests non-standard pricing structures to mitigate risk which might otherwise impair their decision to connect to the network.

Distributed Generation Pricing

The Pricing Roadmap requires MainPower to ensure its pricing *evolves to reflect emerging technologies*. During the 2022-23 year, MainPower continued to monitor the uptake of these emerging technologies on its network. The results in Figure 14 show there are a limited number of small-scale distributed generators (DG) connected to the network at around 3% of ICPs. These generation units are less than 10kW, generally under 2kW, and are typically associated with an existing ICP (i.e. photovoltaic solar panels supplementing distributed electricity supply).

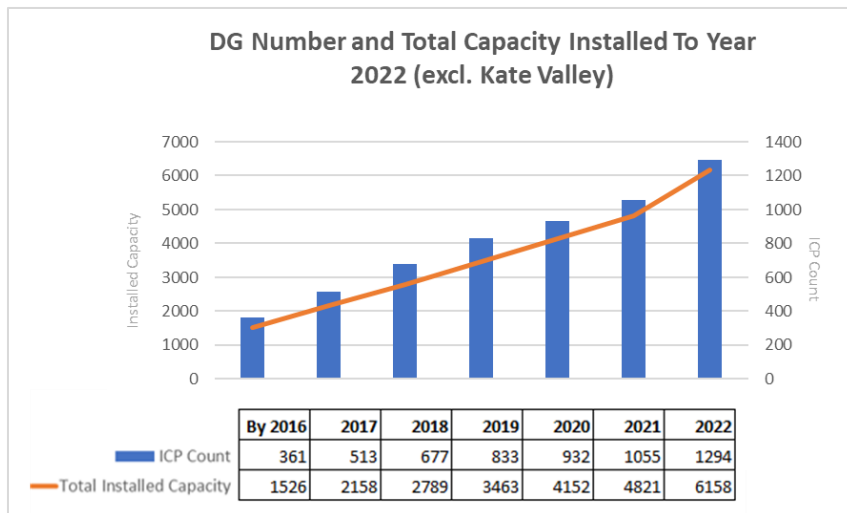


Figure 14: Distributed Generation on the MainPower Network

To date MainPower has not charged for this type of small-scale distributed generation connected to the network or made payments in regard to any potential avoided costs.

Considering the current and forecast uptake rates of DG, MainPower for the next pricing period will not introduce a price signal through the DG component of the tariffs as it is deemed unnecessary. However, the transition to a higher proportion of fixed charges and associated reduction in variable charges has gone some way towards better reflecting the cost to serve consumers with PV.

MainPower will continue to closely monitor uptake rates of PV during P4 in combination with the load profile impact on the residential and general consumer groups.

Electric Vehicle Charging

MainPower continues to consider ways to manage the impact of EV charging on the network. The uptake and impact of EV charging on the network is difficult to monitor due to lack of visibility. Unlike new connections or installation of PV a consumer is not required to make an application to MainPower if they wish to charge an EV at home unless a capacity upgrade is required. In combination with pricing options MainPower is updating its network connection standards and consumer contracts so that MainPower has visibility of EV charging in the network, particularly fast chargers.

In 2022-23 an additional pricing component for EV's was made available to apply to the tariff structure.

4.7 Future Considerations

The Pricing Roadmap (Figure 12) requires consideration in P5 of a broader set of outcomes across MainPower's strategic pricing themes. The table below describes these in more detail:

Outcome	Description
Reduce cross-subsidisation	Continuation of the rebalancing of the revenue between consumer groups (to reduce cross-subsidisation) extended into P5.
Evolve to reflect emerging technologies	Emerging technologies such as photovoltaics, electric vehicle charging, and battery storage will require specific tariffs to support their use on the network. Implementation of DSM strategy including price signals (potentially through add on tariff options).
AMP-price inter-dependency	Continued integration with the AMP, particularly around total spend and terminal RAB value for each regulatory period. Continue a phased reduction of the rebate to align with the long-term capital investment requirements of the AMP.
Evolve to reflect temporal and location constraints	Closely linked to the above but targeting specific locational and time constraints across the network and developing pricing to address any issues were appropriate. Implementation of DSM strategy including price signals.

Table 21: Future Considerations P5

5 Pricing Changes for disclosure year 2023

Price Changes become effective from 1 April 2023.

The following is a summary of the annual cost movement likely to be realised in the 2023-2024 year for the average consumer in each group:

- An increase for residential consumers of \$96 or 11.2%
- Low user change to daily rates as part of the phase out of this regulation.
- A decrease for irrigation consumers of \$146 or 2.6% due to a decrease in forecast consumption.
- An increase for non-residential consumers of \$240 or 11.4%.
- The large user group covers a wide range of users but overall, the group sees a decrease of 5% due to lower forecast consumption.
- Refer to Appendix D for a full list of rates and movements. A full copy of the line delivery price schedule applying from 1 April 2023 is available on the pricing page of MainPower's website. This schedule breaks down the price into what is attributable to distribution and transmission components.

6 Appendix A: Electricity Authority Pricing Principles Checklist & Distribution Pricing Practice Focus Areas.

This appendix describes the extent to which our pricing methodology is consistent with the EA’s pricing principles, pursuant to section 2.4.3(2) of the IDD.

MainPower has reviewed its pricing methodology against the pricing principles (table below) and Electricity Authority Pricing Practice Focus Areas and are of the view that our pricing methodology is broadly consistent with the principles.

Electricity Authority Pricing Principles:

Pricing Principle	Extent of consistency
(a) Prices are to signal the economic costs of service provision, including by:	
(i) being subsidy free (equal to or greater than avoidable costs, and less than or equal to standalone costs);	<p>Avoidable costs are those that can be avoided by not serving a consumer or group of consumers. They include the costs of billing and consumer service costs, connection costs specific to the consumer or consumer group and additional maintenance costs.</p> <p><i>For capital costs:</i> MainPower’s Capital Contributions Methodology is the primary mechanism by which the company ensures that prices recover avoidable costs. It seeks capital contributions for new connections and asset upgrades when the expected distribution revenue from a connection is less than the incremental costs (including a share of any upfront or future network augmentation costs). Distribution prices will therefore be in equal or in excess of avoidable capital costs.</p> <p><i>For operational costs:</i> The remaining incremental operational expenditure is recovered through distribution prices. The fixed charge will recover a proportion of these costs regardless of the level of consumption. The rates have been set to recover those fixed costs associated with each consumer group. Revenue received from variable charges, will in most cases recover the remaining incremental costs. The potential exceptions include residential consumers on low user fixed charges where cross-subsidisation may exist, though this will be reduced over time as these regulations are phased out.</p> <p>Prices are also likely to be less than standalone cost. MainPower understands standalone cost to mean the cost to the consumer of bypassing or replicating the network with alternative supply arrangements (e.g. connection to the grid through its own distribution assets, or alternative fuel or generation sources). For most mass market consumers, the costs of moving “off-grid” to a standalone energy solution (e.g. rooftop PV) is currently priced at a premium to distributed electricity supply. This is because the large economies of scale associated with network investments mean distribution networks currently remain competitive on price and reliability.</p> <p>Large consumers are likely to be better placed to bypass the network at a lower overall standalone cost. As an example, MainPower’s largest connection is on a non-standard contract to discourage bypass of the network to the transmission grid. The non-standard arrangements ensure it is economic for this consumer to remain connected to the network by pricing below the standalone cost of connecting directly to the grid.</p>
(ii) Reflecting the impacts of network use on economic costs	This principle asserts that behaviour which creates additional investment costs for distributors should be recognised in pricing, and that costs should accordingly be recouped from those consumers that create them. The key drivers of future

Pricing Principle	Extent of consistency
	<p>network investment costs relate to new connections and system capacity growth.</p> <p>MainPower ensures it recoups avoidable connection and upstream reinforcement costs through its Capital Contributions Methodology, as discussed above.</p> <p>Further, MainPower has rebalanced its revenue to have a higher portion delivered through fixed charges. This is because a significant amount of its costs are fixed and vary little through energy demand.</p> <p>MainPower has retained an element of a variable charge. The use of a consumption based variable charge is a pricing approach which recognises additional usage of capacity. While prices based on kWh consumption provide a crude proxy for capacity utilisation, they send a signal that additional usage of the network creates additional costs over time.</p> <p>The <i>Residential Night Only</i> price provides incentives for consumers who take up this option to shift their demand to the off-peak night period. Further, the <i>Residential Uncontrolled</i> price signals that if consumers do not provide control to the network to manage faults and reduce peak demand that this may require additional investment in the network, these options appropriately signal the impact of additional usage on investment costs.</p> <p>As discussed above, the <i>Irrigation</i> price signals capacity constraints on the network attributable to this significant consumer group by levying a higher fixed daily charge on relatively larger irrigation motors.</p> <p>MainPower currently does not have any explicit network areas which are capacity constrained and therefore do not include any locational based pricing.</p>
(iii) Reflecting the differences in network service provided to (or by) consumers; and	<p>The primary service that MainPower provides is access to network capacity. This principle sets out that distributors should recognise this primary driver in setting prices and pricing structures. Signalling available service capacity in prices is therefore significant. MainPower currently does not explicitly define consumer groups by the level of available service capacity. However, the distinction made between low users, residential, non-residential, and large users does proxy different consumer capacity profiles.</p> <p>Similarly, <i>Residential All Inclusive</i> and <i>Night Special</i> pricing options are designed to incentivise behaviours that reduce demand at the peak or during fault events. This reduces the pressure on available service capacity as well as defers investments in new capacity.</p> <p>The <i>Irrigation</i> price is based on the currently known installed kW capacity of irrigation pump motors and is designed to signal limited capacity in the high voltage distribution system. This price option, as well as capital contributions sought from irrigators, signals that upstream capacity is limited.</p> <p>Further, the <i>Residential All Inclusive</i> pricing option deliver a different (lower) service level to consumers (via interruptible load) and comes with lower associated pricing.</p>
(iv) Encouraging efficient network alternatives	<p>This principle seeks to encourage the development of distributed generation, load control other demand side solutions.</p> <p>MainPower does not levy lines charges on the connection of small-scale distributed generation to the network. This provides appropriate incentives for consumers to invest in distributed generation as they do not face any additional distribution costs beyond that related to their standard ICP connection. Furthermore, distributed generation will usually lower a consumer's variable distribution costs resulting in lower annual costs. This further provides incentives to invest in these technologies.</p>

Pricing Principle	Extent of consistency
	<p>Where there are upfront costs in relation to connecting distributed generation, which is unlikely, this will be dealt with as part of MainPower's Capital Contributions Methodology.</p> <p>Demand response measures are encouraged through the use of our <i>Residential All Inclusive</i> and <i>Residential Night Only</i> pricing options, which are priced attractively to incentivise consumers to offer up interruptible load or reduce their demand at the daytime peak, respectively.</p>
<p>(b) Where prices that signal economic costs would under-recover target revenues, the shortfall should be made up by prices that least distort network use.</p>	<p>Residual costs are largely reflective of the fixed cost nature of MainPower's business. The revenue streams are aligned to reflect the portion of these fixed costs and as such provide a clear mechanism of recovery without providing any incentive to distort network use. The quantum of residual costs to recover are allocated in proportion to each consumer group via analysis of their contribution to these costs.</p>
<p>(c) Prices should be responsive to the requirements and circumstances of consumers by allowing negotiation to:</p>	<p><i>Residential Uncontrolled</i> pricing option is higher recognising that consumers who do not want their hot water load interrupted are willing to pay more for that supply. Similarly, the <i>Residential Night Only</i> price is targeted at consumers who are willing to limit their demand at the peak in preference for a lower off-peak charge during the night.</p> <p><i>Non-Residential Large Users</i> on the MainPower network have pricing applied that reflects the level of forecast consumption. This recognises the balance between high consumption placing demand on the network, contributing to future constraints but also <i>Non-Residential Large Users</i> having a lower weighted average variable rate to reflect consumption over 500,000 kWh pa.</p> <p>MainPower's non-standard pricing also partially recognises willingness to pay by a consumer that is readily able to bypass the network. This approach will be considered for any consumer in similar circumstances.</p>
<p>(i) reflect to economic value of service; and</p>	<p>This allows for a discount on price or other incentives being offered to consumers at risk of bypassing MainPower's network. Bypass options are likely to be more available to larger consumers that have options over where they locate their business, or which have access to alternative energy supply (e.g. gas, generation, the transmission grid).</p> <p>MainPower has one consumer that is directly supplied from Transpower's national grid, using MainPower's equipment. This consumer could readily bypass the distribution network in favour of a direct connection to the grid. To recognise this risk, MainPower has entered into a non-standard contract with this consumer and prices are set with reference to the actual (or avoidable cost) of offering these services. This discourages uneconomic bypass of the distribution network.</p>
<p>(ii) enable price-quality trade-offs.</p>	<p>This principle allows for negotiation over price in recognition of different levels of service (e.g. redundancy) or non-standard arrangements (higher fixed charge component to reduce risk).</p> <p>As discussed above, MainPower has one non-standard contract and is willing to negotiate on price and quality outcomes and non-standard arrangements with other consumers where necessary. In addition to incremental cost pricing, a higher fixed charge is applied which reduces price variability for this consumer.</p> <p>Price and quality trade-offs are also addressed as part of MainPower's Capital Contributions Methodology. For instance, if a consumer requires specialist equipment or connection redundancy then a contribution is typically sought from the consumer to recover costs associated with this investment.</p> <p>Residential users pay have the choice between an <i>All Inclusive</i> and <i>Uncontrolled</i> pricing option. The <i>Uncontrolled</i> being more expensive, reflecting the lower quality of service of having interruptible demand.</p>

Pricing Principle	Extent of consistency
(d) Development of prices should be transparent and have regard to transaction costs, consumer impacts and uptake incentives.	<p>MainPower considers the information in this Pricing Methodology provides appropriate explanations of how it has set prices and the rationale for doing so.</p> <p>As part of MainPower’s pricing methodology (Roadmap), the proposed changes for each consumer group will be phased in over time. This will reduce the price impact and allow time for consumers to understand the rationale behind the changes and provide feedback.</p>

Table 22: Pricing Principles

Distribution Pricing Practice Note:

Reform Focus Areas	MainPower Response
Distributors’ roadmaps responding to future network congestion.	<p>See Section 4 “Strategic Pricing Implementation”</p> <p>EV Tariff introduced.</p> <p>Development of the DSM strategy will assess future options for hot water ripple control and other flexible demand side responses at a network level. Options for pricing signals will be informed by the DSM strategy.</p> <p>More flexible billing system being implemented.</p>
Distributors’ response to any significant first mover disadvantage (FMD) issues facing customer seeking to connect to their networks (new and expanded connections).	<p>Capital Contributions Methodology reviewed and updated.</p> <p>Paybacks updated to ensure MainPower approach is aligned with other networks.</p>
The extent to which distributors are following the Authority's guidance on pass-through of new transmission charges into distribution pricing.	<p>EA guidance:</p> <ol style="list-style-type: none"> Map transmission charges to each distribution pricing area - Although MainPower has a single pricing area (excluding its non-standard customer), all costs including transmission costs are allocated to an ICP level. Use fixed distribution charges where possible – Transmission charges are recovered using fixed charges for all price categories except for low user pricing options where it is not possible to recover transmission costs through a fixed charge. Pass step changes through to the causers – this will be implemented where relevant in respect of new investments. Manage disconnects between transmission and distribution pricing by exception – MainPower has one non-standard connection which has individualised pricing to ensure transmission charges are passed through. Low user pricing causes the only known material disconnect at this time. Avoid a disproportionate level of complexity – Transmission costs are recovered by a simple fixed charge pass-through except in the case of low user price options where they are recovered using a variable charge.
Whether distributors are increasing their use of fixed charges to match the phase-out path of the low fixed charge tariff regulations.	MainPower is phasing the fixed charges out in line with the amended low fixed charge tariff regulations.
Distributors avoiding, or transitioning away from, recovery of costs that are fixed in nature through use-	MainPower is endeavouring where possible to recover all fixed costs through the use of fixed charges and this is

based charges, such as charges based on a customer's Anytime Maximum Demand (AMD).	reflected in its pricing structure. Currently 72% of cost components (including the majority of transmission costs) are deemed to be fixed in nature and 67% of revenue is recovered through fixed pricing components.
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Table 23: Distribution Pricing Practice Note

For more details information related to the Pricing Practice focus areas please refer to the EA website <https://www.ea.govt.nz/operations/distribution/pricing/>

7 Appendix B: Directors Certification



MainPower New Zealand Limited
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CERTIFICATE FOR YEAR-BEGINNING 1 APRIL 2023 DISCLOSURE

Pursuant to Clause 2.9.1 of Section 2.9 of the Electricity Distribution Disclosure Determination 2012 (consolidated 9 December 2021)

We, ANTHONY CHARLES KING and STEPHEN PAUL LEWIS, being Directors of MainPower New Zealand Limited, certify that, having made all reasonable enquiry, to the best of our knowledge:

- a) The following attached information of MainPower New Zealand Limited prepared for the purposes of clause 2.4.1 of the Electricity Distribution Information Disclosure Determination 2012 in all material respects complies with that determination; and
- b) The prospective financial or non-financial information included in the attached information has been measured on a basis consistent with regulatory requirements or recognised industry standards.

Anthony Charles King
Tony King
02/22/2023 15:21 NZDT

Date

Stephen Paul Lewis
Stephen Lewis
02/22/2023 14:38 NZDT

Date

8 Appendix C: Glossary

Code	Electricity Industry Participation Code 2010.
Commerce Commission	Responsible for the regulation of EDBs as provided for under Part 4 of the Commerce Act 1986.
Distributed Energy Resource	A distributed energy resource (DER) is a small-scale unit of power generation that operates locally and is connected to a larger power grid at the distribution level.
Distributed Generation (DG)	Generation of electricity for use on-site, rather than transmitting energy over the electric grid from a large, centralised facility.
EDB	Electricity Distribution Business.
Electricity Authority (EA)	The independent Crown entity that provides regulatory oversight of the electricity sector.
EV	Electric Vehicle.
ICP	Installation Control Point: A point of connection on a local network which the distributor nominates as the point at which a retailer will be deemed to supply electricity to consumers.
IDD	Electricity Distribution Information Disclosure Determination 2012, issued 1 October 2012 (Decision No. NZCC22).
kVA	Kilo Volt-Amp: Measure of apparent electrical power usage at a point in time.
kW	Kilowatt: Measure of instantaneous real electrical power usage.
kWh	Kilowatt hours: Measure of real electrical power usage per hour.
Low fixed charge regulations	Electricity (Low Fixed Tariff Option for Domestic Consumers) Regulations 2004.
Non-Qualifying Customers	Consumers connected to the former Kaiapoi Electricity network.
Part 4	Part 4 of the Commerce Act 1986 governing the regulation of EDBs as administered by the Commerce Commission.
PV	Photovoltaic.
Qualifying Customers	Customers who receive lines services from MainPower New Zealand Limited and whose premises are located in the area previously served by the North Canterbury Electric Power Board, excluding temporary supply customers.
ROI	Return on Investment.
Transpower	Owner and operator of the national transmission grid.
WACC	Weighted Average Cost of Capital.

Table 24: Glossary

9 Appendix D: Pricing Levels

Customer price categories	Code	Fixed Charge						% Change	Variable Charge					
		Gross	Rebate / Discount	Net	Transmission	Total	Gross		Rebate / Discount	Net	Transmission	Total	% Change	
		Dollars/day	Dollars/day	Dollars/day	Dollars/day	Dollars/day	Dollars/kWh		Dollars/kWh	Dollars/kWh	Dollars/kWh	Dollars/kWh	Dollars/kWh	
Residential - Options														
All Inclusive Standard User	mpaistd	2.4060	-0.4777	1.9283	0.5855	2.5139	23.7%	0.0112	0.0000	0.0112	0.00000	0.0112	-45%	
All Inclusive Low User	mpailu	0.4500	-0.0893	0.3607	0.0000	0.3607	59%	0.0980	0.0000	0.0980	0.01135	0.1094	6.8%	
Uncontrolled Standard User	mpucstd	2.4060	-0.4777	1.9283	0.5855	2.5139	23.7%	0.0387	0.0000	0.0387	0.00000	0.0387	-13.8%	
Uncontrolled Low User	mpuclu	0.4500	-0.0893	0.3607	0.0000	0.3607	59%	0.1252	0.0000	0.1252	0.01170	0.1369	7.7%	
All Inclusive with Night Only Standard User	mpnistd	2.4060	-0.4777	1.9283	0.5855	2.5139		0.0112	0.0000	0.0112	0.00000	0.0112		
All Inclusive Standard User		2.4060	-0.4777	1.9283	0.5855	2.5139	23.7%	0.0112	0.0000	0.0112	0.00000	0.0112	-45%	
Night Only Standard User		2.4060	-0.4777	1.9283	0.5855	2.5139		0.0000	0.0000	0.0000	0.00000	0.0000	-100%	
All Inclusive with Night Only Low User	mpnilu	0.4500	-0.0893	0.3607	0.0000	0.3607		0.0980	0.0000	0.0980	0.01135	0.1094		
All Inclusive Low User		0.4500	-0.0893	0.3607	0.0000	0.3607	59%	0.0980	0.0000	0.0980	0.01135	0.1094	7%	
Night Only Low User		0.4500	-0.0893	0.3607	0.0000	0.3607		0.0869	0.0000	0.0869	0.01135	0.0982	58%	
Other Supply														
Non-Residential	mpnonres	3.9950	-0.2970	3.6981	0.9587	4.6567	44%	0.0289	0.0000	0.0289	0.00000	0.0289	-29%	
Temporary Supply	mptemp	3.0210	0.0000	3.0210	0.7192	3.7402	22%	0.0000	0.0000	0.0000	0.00000	0.0000	-100%	
Irrigation per kW connected	mpirr	0.1652	-0.0062	0.1589	0.0913	0.2502	27%	0.0291	0.0000	0.0291	0.00000	0.0291	-30%	
Council Pumping	mpcounpump	4.4100	-0.1627	4.2473	2.4490	6.6963	37%	0.0223	0.0000	0.0223	0.00000	0.0223	-16%	
Streetlighting per fitting connected	mpstlgt	0.0984	-0.0037	0.0947	0.0276	0.1223	19%	0.0000	0.0000	0.0000	0.00000	0.0000		
Non-Residential Large Users	mplgeuser	74.1175	-2.2095	71.9080	48.2920	120.2000	60%	0.0286	0.0000	0.0286	0.00000	0.0286	-29%	
Distributed Generation	mpdistgen	0.0000	0.0000	0.0000	0.0000	0.0000	0%	0.0000	0.0000	0.0000	0.00000	0.0000	0%	
Optional Additions														
Right of Way Lighting	-row							0.0686	0.0000	0.0686	0.00000	0.0686	0%	
Under Verandah Lighting	-uv							0.0686	0.0000	0.0686	0.00000	0.0686	0%	
Distributed Generation	-dg	0.0000	0.0000	0.0000	0.0000	0.0000	0%	0.0000	0.0000	0.0000	0.00000	0.0000	0%	
Electric Vehicle	-ev	0.0000	0.0000	0.0000	0.0000	0.0000	0%	0.0000	0.0000	0.0000	0.00000	0.0000	0%	

Table 25: Pricing Levels

10 Appendix E: Revenue Summary

Revenue Summary							
	# of ICPS	Consumption	Distribution		Transmission		Total
		MWh	Fixed	Variable	Fixed	Variable	
			\$ 0,000	\$ 0,000	\$ 0,000	\$ 0,000	\$ 0,000
Non-standard	1	46,524	317	-	1,489	-	1,806
General	5,496	125,674	7,889	3,622	1,903	0	13,414
Irrigation	1,400	80,677	3,583	2,344	1,973	0	7,900
Large User	44	57,841	1,132	1,600	738	-	3,470
Pump	205	13,050	330	291	183	-	804
Residential	37,200	311,523	21,571	12,375	4,627	1,059	39,631
Streetlight	107	3,879	250	-	70	-	320
Total	44,453	639,169	35,072	20,231	10,983	1,059	67,344

Table 26: Revenue Summary

*Forecast active ICPS at 31/03/2024