May 2021

Distribution Pricing Roadmap

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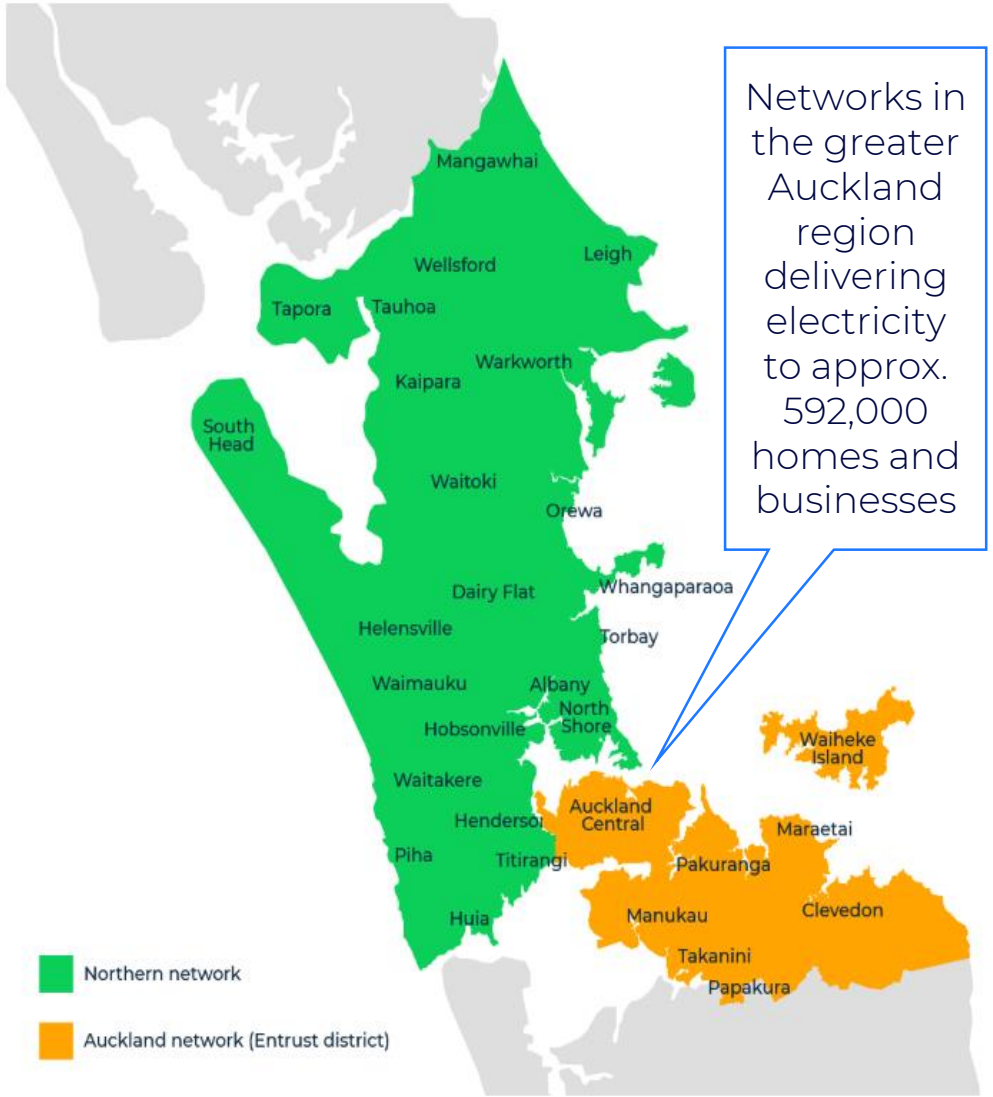
INTRODUCTION

Vector provides electricity lines services to customers via its electricity distribution network covering the Auckland region. Vector recovers the cost of providing electricity lines services to:

- existing customers through electricity distribution prices (lines charges), including published standard prices[1] and (in a limited number of circumstances) non-standard prices; and
- new or enhanced connections through capital contributions[2] (upfront one-off payment) as well as line charges.

Vector's asset management plan[3] (AMP) sets out our view of the investments we believe will deliver the best outcomes given the uncertainty over future electricity demand.



Networks in the greater Auckland region delivering electricity to approx. 592,000 homes and businesses

[1] Pricing schedule available at https://www.vector.co.nz/personal/electricity/about-our-network/pricing

[2] Capital contribution policy available at https://www.vector.co.nz/about-us/regulatory/disclosures-electricity/capital-contributions

[3] Asset management plan available at https://www.vector.co.nz/about-us/regulatory/disclosures-electricity/asset-management-plan

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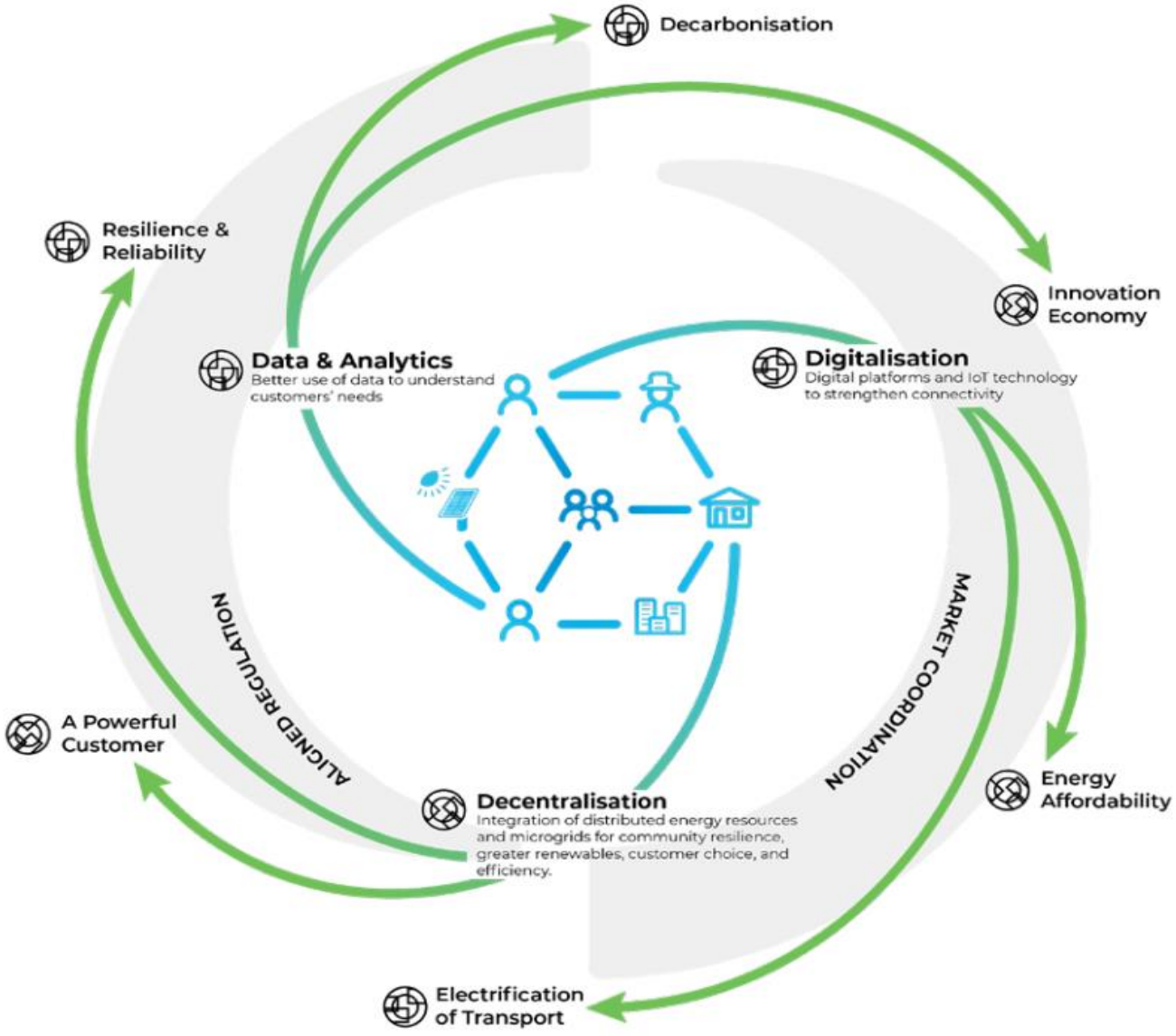
VECTOR'S SYMPHONY STRATEGY

Vector's Symphony Strategy is about creating a system for our customers that fits the future, delivering safe, cleaner, more reliable and affordable energy solutions that are developed with customers at the centre, and which helps us navigate future uncertainty.

Symphony is how we intend to transform the traditional poles and wires of the electricity networks serving the Auckland region into an intelligent energy system where customers have more choice and control.



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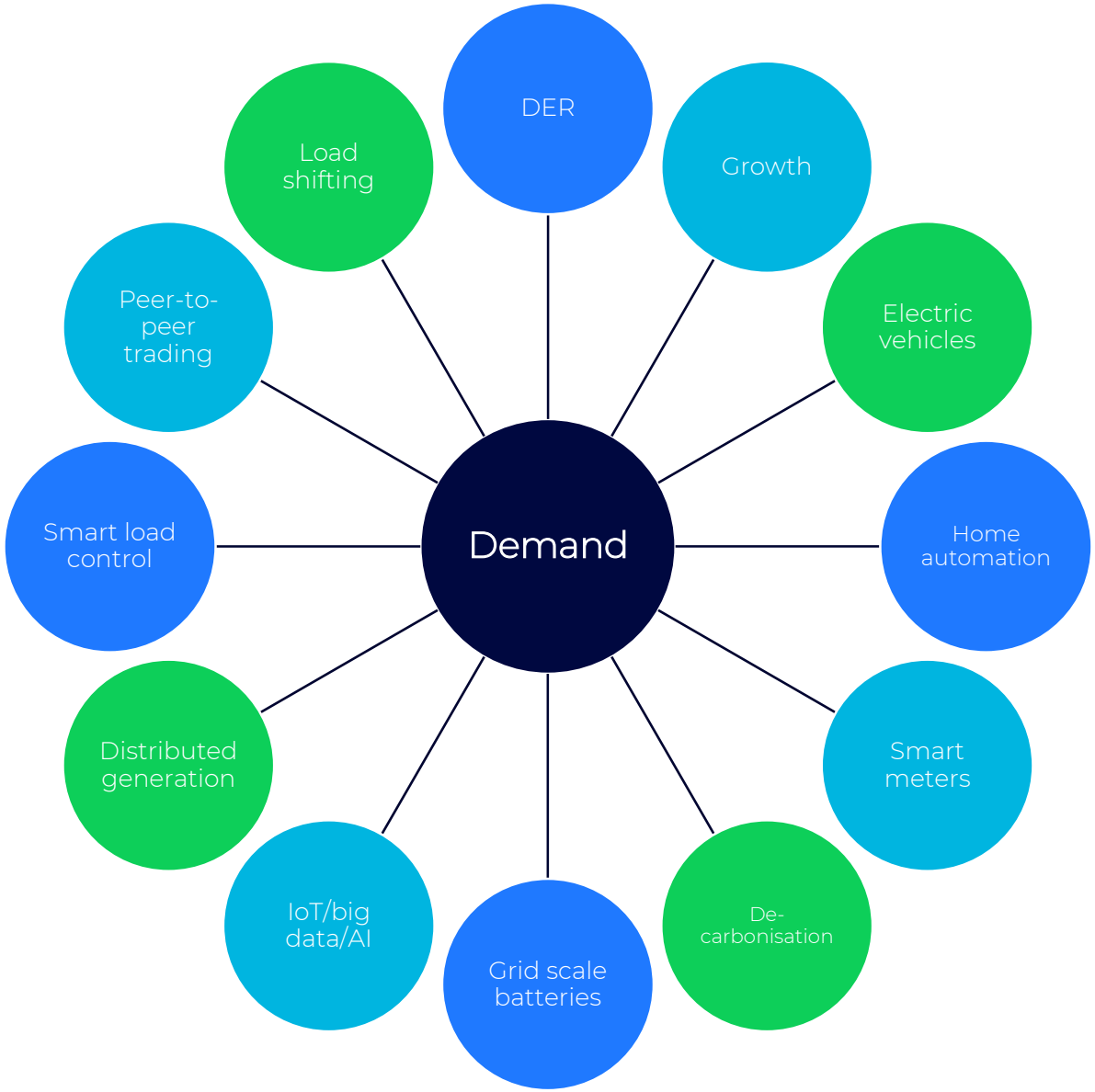
PRICING AS A PART OF OUR SYMPHONY STRATEGY

Vector's Symphony Strategy seeks to leverage new energy solutions to meet energy needs affordably – starting with the customer not the power plant.

Supporting Symphony:

- Traditional assets
- New technology
- Digital assets
- Customer integration/choice and experiences
- Delivering value from data analytics
- Capital contributions
- Line charge prices



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CUSTOMER-CENTRIC PRICING

Pricing structures need to satisfy customers and business needs:

- Explain prices simply
- Get input
- Design around what customers value
- Test / trial
- Implement
- Manage impacts

For pricing structures to be sustainable they must be acceptable to customers

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PRICING APPROACH

- Data driven analysis
- Meet regulatory requirements including Electricity Authority Pricing Principles
- Ensure prices appropriately reflect costs to the system
- Assessment of evolving technologies

ANNUAL PRICE REVIEW

- Customer insights
- Leverage international best practice
- Industry engagement
- Retail consulation

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PRICING OBJECTIVES

Trade-offs between competing objectives:

- Service based/cost reflectivity – what is the customer purchasing, what drives Vector and customer investment?
- Simplicity/acceptability – could the customer understand the pricing, is it sufficiently predictable to be actionable?
- Bill impact – what are the customer-level drivers of their cost changes?

Underpinned by consideration of:

- Regulatory requirements, including EA Pricing Principles
- Economic theory
- Practical implementation aspects
- Regulatory and public perceptions
- Customer effects and expectations
- Revenue risk implications
- Low Fixed Charge (LFC) regulations

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MASS MARKET PRICING REFORM (2020 & 2021)

Mandatory time of use pricing for mass market customers introduced on 1 April 2020. Five structures were considered:

These pricing structures were assessed against the objectives and upon balancing a range of trade-offs and underpinned by regulatory requirements, ToU was the best overall candidate for a standard price structure.

We have undertaken a review our 2020 analysis, and ToU remains as the most appropriate pricing structure under the current constraints such as LFC.

ToU offers customers the ability to reduce their electricity bill by shifting some electricity use from peak to off-peak times as well as encouraging take-up of new technology.

Existing pricing – no time differentiation

- c/kWh anytime

Time of Use (ToU) - Peak and off-peak, all year

- c/kWh peak & c/kWh off-peak

Dynamic Volumetric – 10 peak days

- c/kWh plus c/kWh 10 peak TOU periods/year

Demand based – Monthly peak half-hour

- $/kW/month

Fixed – Capacity or fully fixed

- $/kW nominated or $/year

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LOW FIXED CHARGE REGULATIONS

The LFC regulations require retailers to offer domestic customers with below average annual usage a tariff with a fixed charge of no more than 30c per day (actual retail fixed charges for standard customers can be over $2 per day). These regulations impede implementation of some mass market tariff options (demand based, fully fixed) that have been previously considered.

"The Electricity Price Review recommended phasing out the Low Fixed Charge regulations as they are poorly targeted and have unintended consequences for many households. It's clear that the existing regulations also pose a challenge for distribution pricing reform.

The Electricity Authority's 2020 Distribution Pricing Scorecards highlighted that progress towards more efficient pricing has stalled due to the Low Fixed Charge Regulations."

Hon Dr Megan Woods, Minister for Energy and Resources - 12 April 2021

Vector are hopeful that the LFC regulations will be phased out to allow distributors to move to more efficient pricing.

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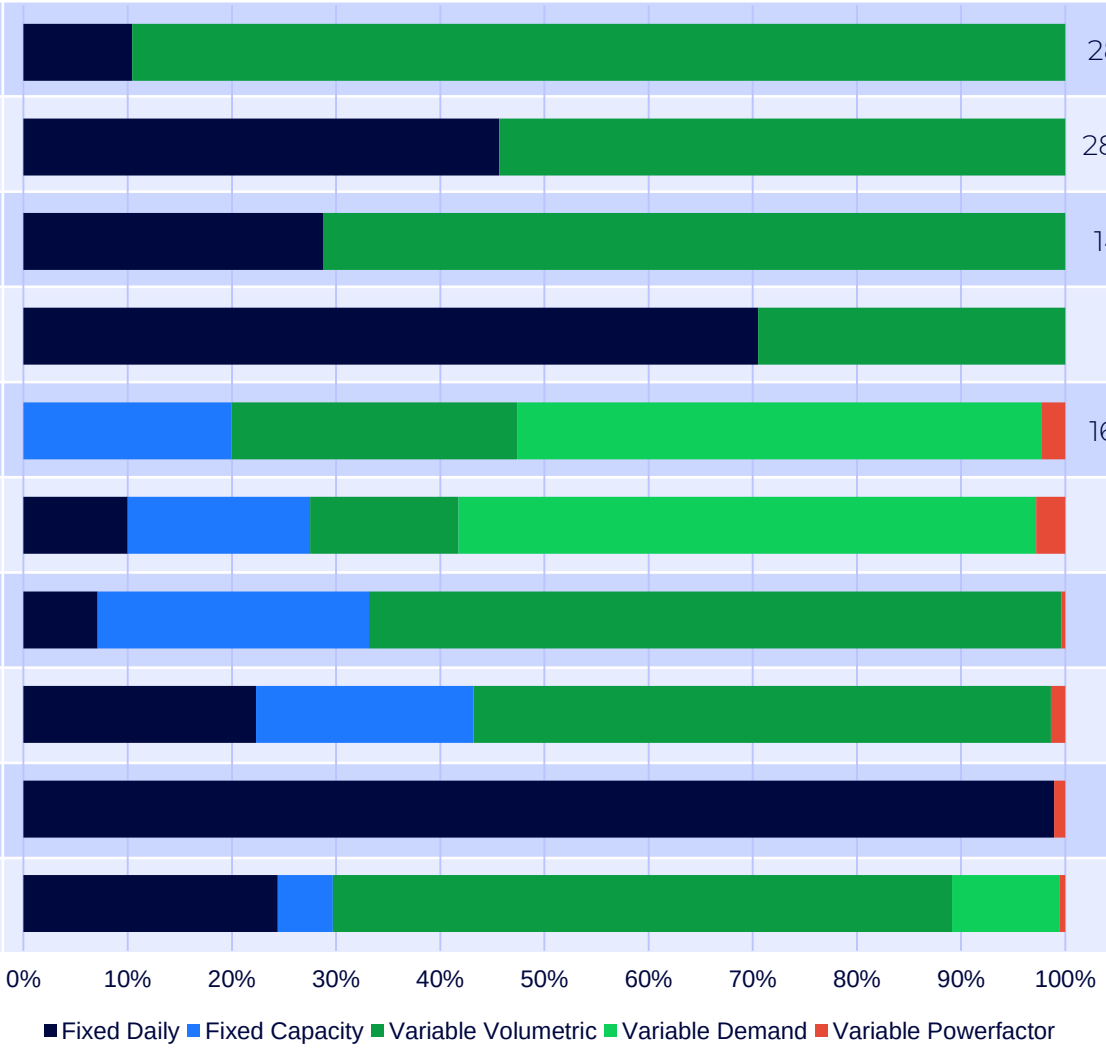
2021/22 PRICING STRUCTURE

Consumer group and subgroup		Estimate of PY22 target revenue by price component, % of total target revenue / % of total volume	Rationale and limitations
Mass market	Residential - Low user	28% / 19%	Time of use assessed as best option with LFC, 60% of residential customers are on low user tariffs. Peak to off peak $ differential same for low and standard user, aligned with transmission charges.
	Residential - Standard user	28% / 22%	
	General	14% / 13%	Prices match residential standard uncontrolled user to prevent arbitrage between the mass market tariffs.
	Unmetered	1% / 1%	Predominantly fixed daily charges per fitting, with an assessed consumption relating to the fittings' wattage.
Commercial	Auckland - Time of use	16% / 25%	Structures largely historic with pre-existing pricing differences between the two networks. Bill impact is a significant consideration when exploring structural changes. Cost reflective with fixed charges predominantly through capacity charges and where applicable, variable charges predominantly recovered through demand charges.
	Northern - Time of use	4% / 7%	
	Auckland - non time of use	4% / 3%	
	Northern - non time of use	2% / 2%	
	Non-standard	3% / 7%	Monthly fixed charge based incremental cost of the connection with excess demand and power factor.
	Total		



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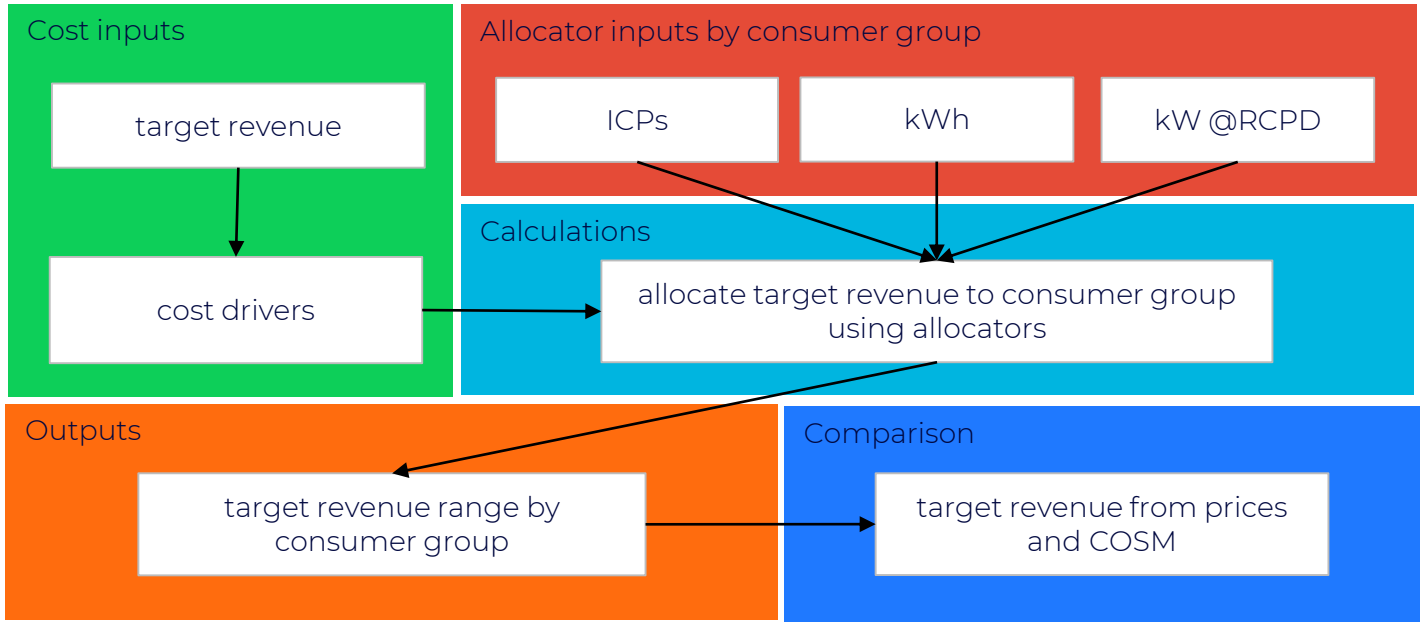
2021/22 PRICING REVIEW - METHODOLOGY

Notwithstanding the LFC regulation and the current lack of access to up-to-date half-hourly consumption data, during 2021/22 Vector will be reviewing its pricing methodology:

- Review inputs and allocation approach of the Cost of Service Model (COSM) to reconfirm it reflects a cost-reflective price-setting methodology
- Review alignment of tariff rates to the cost allocation methodology rates (e.g. see residential cost allocation in table below)
- Explore possibility for transmission charges partially passed through fixed daily/capacity prices (LFC restricts fully fixed as approximately $0.60 cents per day for residential customers)



No per kW tariff for residential customers, therefore approximately 80% of the demand allocation has to be recovered through variable prices due to the LFC regulations

Residential cost allocation	Target revenue range	Average cost allocation rate	Average tariff
Customers (ICPs)	$0-$90m	$0.23 per day	$0.50 per day
Energy	$0-$140m	$0.02 per kWh	$0.07 per kWh
Demand - distribution	$90-$210m	$160 per kW	
Demand - transmission	$100m	$110 per kW	
Total	$330-$400m		

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2021/22 PRICING REVIEW - INNOVATIONS

During 2021/22 Vector will also be investigating many potential pricing elements and innovations:

- Engagement with retailers in customer preference discussions relating to any research, data or insights about what their customers want from electricity prices
- Review price benefit of controlled residential tariffs and how that is passed through
- Review peak to off-peak differential and time periods for mass market tariffs
- Pricing for private and public electric vehicles
- Review the legacy pricing differences for commercial customers between the Auckland and Northern networks
- Explore possibility of new commercial tariff for customers that have paid for their own connection assets
- Explore possibility of new distribution only (excluding transmission) tariff for recipients of embedded network electricity
- Explore possibility for tariffs to support government objectives around decarbonization
- Explore possibility of tariffs differentiating on data provision
- Review interaction between power factor and injection

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