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Association New Zealand

SEANZ Taskforce submission

New ways to empower electricity consumers

SEANZ Strategy and Advocacy Plan – FY 2025
Prepared by: Trent Tscheuschler, Gareth Williams, Katrina Cooper
For: Electricity Authority
Date: 26th March 2025

Package 2A

Questions	Comments
Problem definition	
Q1. Do you agree with the problem definition above? Why, why not?	The problem definition is an accurate reflection of what is going on, with a focus on 4.11, the existing model is based on electricity flowing in one direction. If we want to incentivise Small and Medium scale DG that can support the network peaks, and reduce unnecessary investment in the network, then we must offer pricing incentives to consumers who invest their own capital to support the network. This will be self fulfilling, as the rebates for peak support come on, the investment in consumer owned equipment that can support peaks will increase, reducing further investment in the network outside regular maintenance cycles. (Scheduled Renewal and Replacement)
Proposed solution: principles-based rebates	
Q2. Do you agree with these principles? Why, why not?	By establishing principals, rather than prescribing methods for EDB's to follow, the risk is that there will be inconsistent application across the country, We already see this with EDB import pricing tariffs where some networks have very little variable (c/kWh)

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	component to their rates and / or very little off peak / peak differential. The likely result therefore is that a similar outcome to peak demand export pricing will result.
Q3. Do you agree that the principles should only apply to mass-market consumers, or should they apply to larger consumers and generators also? Why, why not?	They could go broader than just mass-market consumers - they should be extended to larger consumers. Larger consumers have the ability to impact the network in a more effective and efficient way, so should be given the opportunity to
Q4. Do you agree the principles should apply to all mass-market DG, including inflexible generation (noting that the amount of rebate provided will still be based on the benefit the DG provides)?	Yes, as this will have time of use based impacts that can support the grid in some way, though we agree it needs to be of benefit to the network to receive a rebate.
Q5. Do you agree with the direction of the guidance that would likely accompany the principles? Why, why not?	We agree with the direction of the guidance, though we would press for longer term incentives over the short term, even if this requires a margin for the EDB to achieve this outcome.
Q6. Are there any additional issues with the principles where guidance would be particularly helpful?	No

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Q7. Do you agree the principles should be incorporated within the Code, rather than being voluntary principles outside the Code? Why, why not?	The principles should be incorporated in the code. Inconsistency of approach is a major issue for New Zealand, and the code needs more prescription to ensure EDBs follow a consistent process.
Q8. Do you agree with the proposed implementation timeline for this proposal? If not, please set out your preferred timeline and explain why that is preferable.	1 April 2026 is acceptable to SEANZ, with early notification so consumers can prepare for the impending changes by investing in their energy future.
Q9. Do you agree the proposal strikes the right balance between encouraging price-based flexibility and contracted flexibility? Why, why not?	Yes, though it needs to be specific to the area where the network upgrades are required. This will ensure the infrastructure currency in place is fully utilised.
Q10. Do you agree the proposal will lead to relatively minor wealth transfers in the short term, and will lead to cost savings for all consumers in the longer term?	Yes. Keep in mind that customers have to pay for the network either through line charges, or they may wish to spend their own Capex to take control of their energy future. These two outcomes should be balanced ensuring a user pays model doesn't disincentivise consumers ability to invest in their energy future, either via higher line charges or via home energy solutions.
Alternative option: prescribed rebates	

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Q11. Do you agree that more prescriptive requirements to provide rebates will be less workable than a principles-based approach, and therefore should not be preferred? Why, why not?	No in this instance, prescription can drive consistency, which will drive consumer uptake. Inconsistency will drive confusion and reduce the impact of the change
Alternative option: consumption-linked injection tariffs	
Q12. Do you agree that a consumption linked injection tariff would not be sufficiently targeted, and therefore should not be preferred? Why, why not?	Consumption linked injection tariffs won't help reduce the investment required by EDBs, and so they don't have the impact intended here. SEANZ prefers peak demand based inject tariffs to support the reduction in EDB expenditure. It is important that EDBs don't restrict small scale DG consumers from installing a system that matches at least their internal usage (export assessment over nameplate capacity of the DG)
Q13. If this approach was progressed, do you think: a) injection rebates should perfectly mirror consumption charges? b) there are sufficient safeguards in place that would allow distributors to avoid over-incentivising injection to the extent that it incurs additional network costs?	There are costs in retailing, and therefore mirroring the energy only charge is suitable, though not all retailer costs can be returned to the consumer. There needs to be some margin in favour of the EDB for incentivising consumers, so that they can offer long term incentives for consumers. This will assist consumers to invest with some rebate certainty. If the offer is too short, they won't be incentivised to invest.
Regulatory statement	
Q14. Do you agree with the objective of the proposed amendment? If not, why not?	Yes we agree. We should be incentivising consumers with DG to offer into the market where required. We also encourage the further investment in DG by

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	consumers based on the requirements of the distributor.
Q15. Do you agree the benefits of the proposed amendment outweigh the costs?	If the network was built with today's technology available to consumers, we would build the network in a different way. Whilst the benefits in the short term may be lessened by the existing architecture, we should not let this be a barrier to the implementation of the amendment, so we open the future network to the new technologies and start the process of change. In the future, these benefits will increase exponentially as more small scale DG and batteries come on line.
Q16. Do you agree the proposed amendment is preferable to the other options? If you disagree, please explain your preferred option in terms consistent with the Authority's statutory objectives in section 15 of the Electricity Industry Act 2010.	We agree that this amendment is preferable to other options, and prefer prescribed rebates over principles based rebates for the purposes of consistency across all EDBs.
Proposed amendment Code drafting	
Q17. Do you have any comments on the drafting of the proposed amendment?	At this stage we don't have comments on the code drafting, though we would prefer prescription over principles based

Package 2B/C

Questions	Comments

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Q1. Do you agree the issues identified by the Authority are worthy of attention? If not, why not?	Yes, consumers need to be given the option to support the network by varying their usage, and offering their generation into the market where this helps.
Q2. Which option do you consider best addresses the issues and promotes the Authority's main objective? Are there other options we have not considered?	Option 2C best addresses the issues. Supporting BESS promotes both increased load at times of light load and can support the network in times of peak demand.
Q3. Should we require retailers to offer a price plan with time-varying prices for both consumption and injection? Why or why not?	Yes. This optimises the ability for consumers to invest in the technologies that can support the network at times of light loads, and generate at times of peak.This should be offered in a single plan by retailers, though we support MTR as well.
Q4. Do you have any feedback on the design requirements?	The pricing design needs to have long term options, to allow consumers to invest in solar and batteries with certainty. They should have a minimum of 4 years for solar and 6 years for BESS.
Q5. Is there a risk that injection rebates will not be passed through to the consumers targeted? If so, how could we safeguard against this risk?	This could be left to a commercial discussion between EDBs and Retailers, rather than regulated under the code. More importantly, the EDBs need to offer the products to the retailers.
Q6. Which retailers should be captured by the proposal and why?	Retailers with customer counts higher than 50,000 should be captured, so that smaller retailers can still enter the market.
Q7. What are your views on the proposed timeframe for implementation of 1 January 2026? Would 1 April 2026 be preferable, and if so why?	We agree with a 1 January 2026 implementation.

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Q8. What are your views on Part 2 of our proposal that would require retailers to promote the timevarying price plans?	We agree with the 3 ways that the taskforce has proposed.
Q9. What should the Authority consider when establishing the approach to and format of the reporting regime?	The reporting format should be consistent across all retailers, so the requirements should be prescribed by the Authority.
Q10. Should the Authority include a sunset provision in the Code, or a review provision? Why?	A review provision is preferred, as the changes should be subject to change and not removal.
Q11. What are your overall views on Part 3 of the proposal?	The reporting requirements may be overly onerous for small retailers, and considerations for this need to be made by the Authority
Q12. What are your views on Part 4 of our proposal to amend the Code to require that consumers are assigned to time-varying distribution charges, that retailers provide half-hourly data to distributors for settlement	SEANZ supports this proposal, so that retailers can maximise the time of use data to support their communications with consumers, and to provide justification for the time of use pricing they employ. This supports providing smart meter data to distributors, who can better manage their networks and encourage consumers to take up solar and batteries where the need arises for the distributor.
Q13. Do you agree with the objective of the proposed amendment? If not, why not?	We wholly agree with this objective, to drive better utilisation of existing networks, and to promote flexible generation and demand products to consumers by distributors and retailers.

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Q14. Do you agree the benefits of the proposed amendment outweigh its costs?	We agree that the proposed benefits outweigh the costs. This offers a transition away from the existing model to a highly distributed market architecture that supports consumer choice in their energy future.
Q15. Do you agree the proposed amendment is preferable to the other options? If you disagree, please explain your preferred option in terms consistent with the Authority's statutory objectives in section 15 of the Electricity Industry Act 2010.	We agree the amendment is preferable to the other options.

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ELECTRICITY DISTRIBUTION…

Discussion with Electricity Authority
Commerce Commission

Gareth Williams
Trent Tscheuschler
Brendan Winitana

March 2025

#seanz #solar #solarenergy #energystorage
#solarpower #BESS #connect #seanz members

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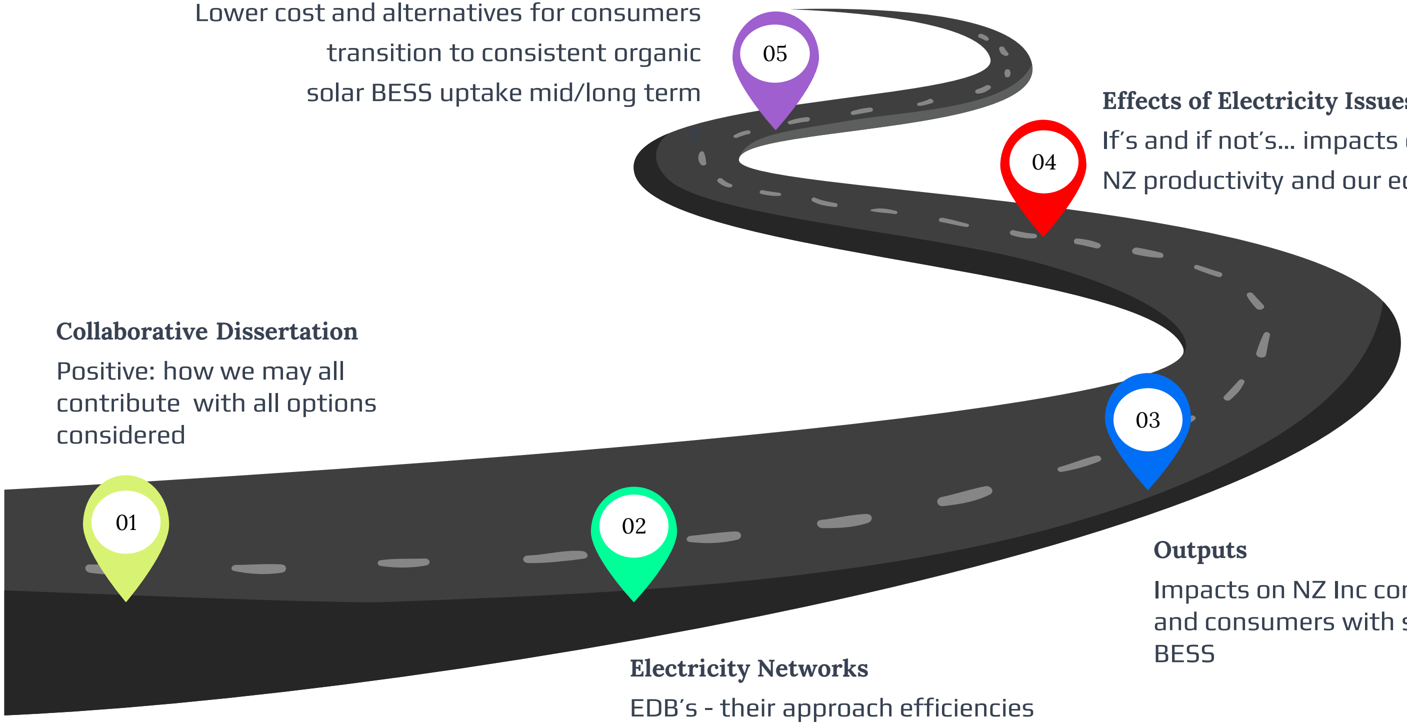
Prelude :: themes and drivers



Collaborative Dissertation

Positive: how we may all contribute with all options considered

Electricity Networks

EDB's - their approach efficiencies and pathway of regulatory certainty

Outputs

Impacts on NZ Inc consumers and consumers with solar PV BESS

Effects of Electricity Issues

If's and if not's... impacts on NZ productivity and our economy

Opportunities

Lower cost and alternatives for consumers transition to consistent organic solar BESS uptake mid/long term

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Electricity Distribution – key issues

Efficiency

How are regulated monopolies **efficiency levels** measured to ensure consumers pay a fair price for services

How are regulated monopolies incentivized to innovate to ensure that pricing to customers is optimal as technology, process and regulation develop

Pricing

Fixed charges are the killer of innovation - there is minimal incentive. Limits DER and greater consumer centric participation in the energy market

Connection

Consumer DER's need grid connection. **Are EDB's willing facilitators or otherwise to uptake** through traditional and conservative approaches

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Efficiency and Network Utilisation

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Efficiency numbers

2013 - 2023	
Electricity supplied	5.20%
Peak demand	9.19%
Transformer Capacity	21.48%
Capex increase	115.02%
Opex increase	70.69%
Inflation	30.00%

Observations

Volume: Small increase (5%)

Peak: Twice the increase in Volume

Transformer capacity increase is double peak

Capex and opex increases need explaining

Are EDB's efficient

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Indicators of efficiency

What	Description	Data Source
Asset value per ICP, trend over time.	We would expect asset value/ICP to be keeping pace with inflation or declining due to productivity improvements	ComCom Tableux Data
Peak/connection, trend over time	This is a measure of how well lines companies are managing peak	ComCom Tableux Data
Transformer utilisation: Ranking and trend over time	A measure of efficiency – how well the transformer capacity is being used	ComCom Tableux Data
Capacity Utilisation and trend	Trend is important. Absolute values are not. Relative trends is the important aspect	ComCom Tableux Data
Past and projected capex	We can rank lines companies in terms of past capex spend and future. Maybe as a ratio of asset base.	ComCom Tableux Data
Trend in cost to serve: Revenue/connection trend	Absolutes won't work but trends should provide some indication	ComCom Tableux Data
Adoption of flex	Flex projects and incentives for flex	Number of flex projects
DG application process time	Defines measured time to process	Stats from PV/BESS industry

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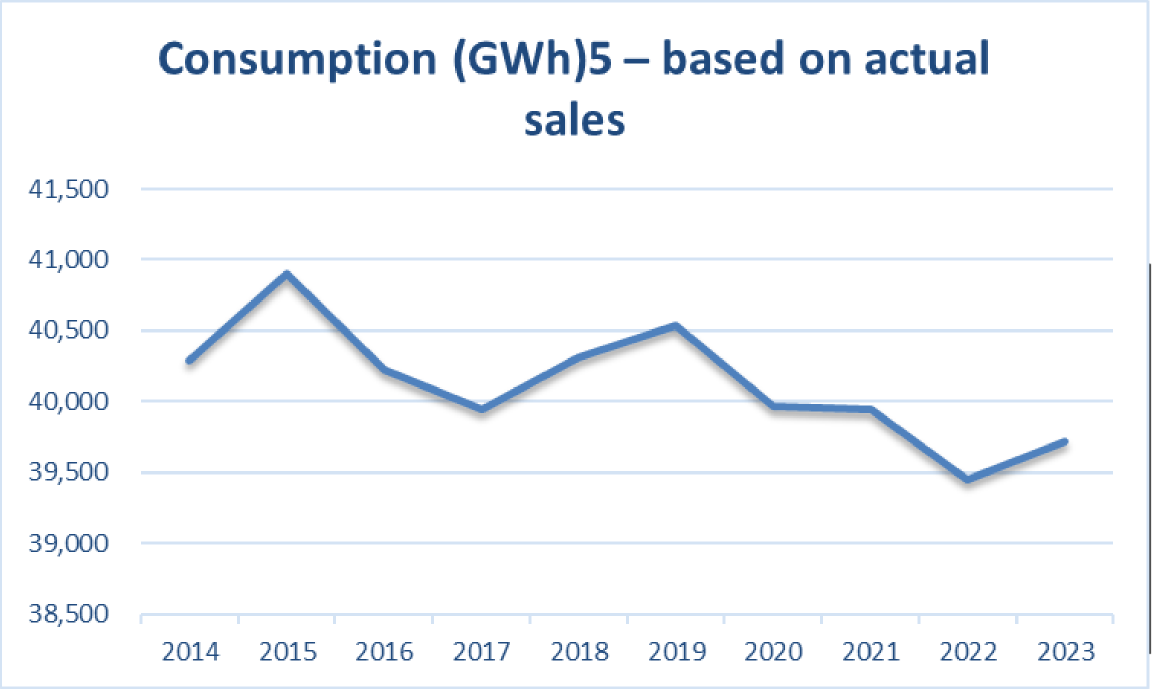
The numbers

Demand across the year has been dropping or level



Source: MBIE Quarterly Report

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The numbers

Demand across the year has been dropping or level

Consumption (GWh)[5]– based on actual sales	39,453	39,722	0.7%
Agriculture, Forestry, and Fishing	2,422	2,474	2.1%
Industrial:	13,501	12,982	-3.8%
Mining	*434*	*452*	4.3%
Food Processing	*2,982*	*3,012*	1.0%
Wood, Pulp, Paper and Printing	*1,451*	*1,040*	-28.3%
Chemicals	*536*	*445*	-17.0%
Basic Metals	*6,266*	*6,241*	-0.4%
Other Minor Sectors	*1,831*	*1,791*	-2.2%
Commercial	9,350	9,518	1.8%
Residential	13,412	13,736	2.4%
Transport	193	275	42.4%

Source: MBIE Quarterly Report

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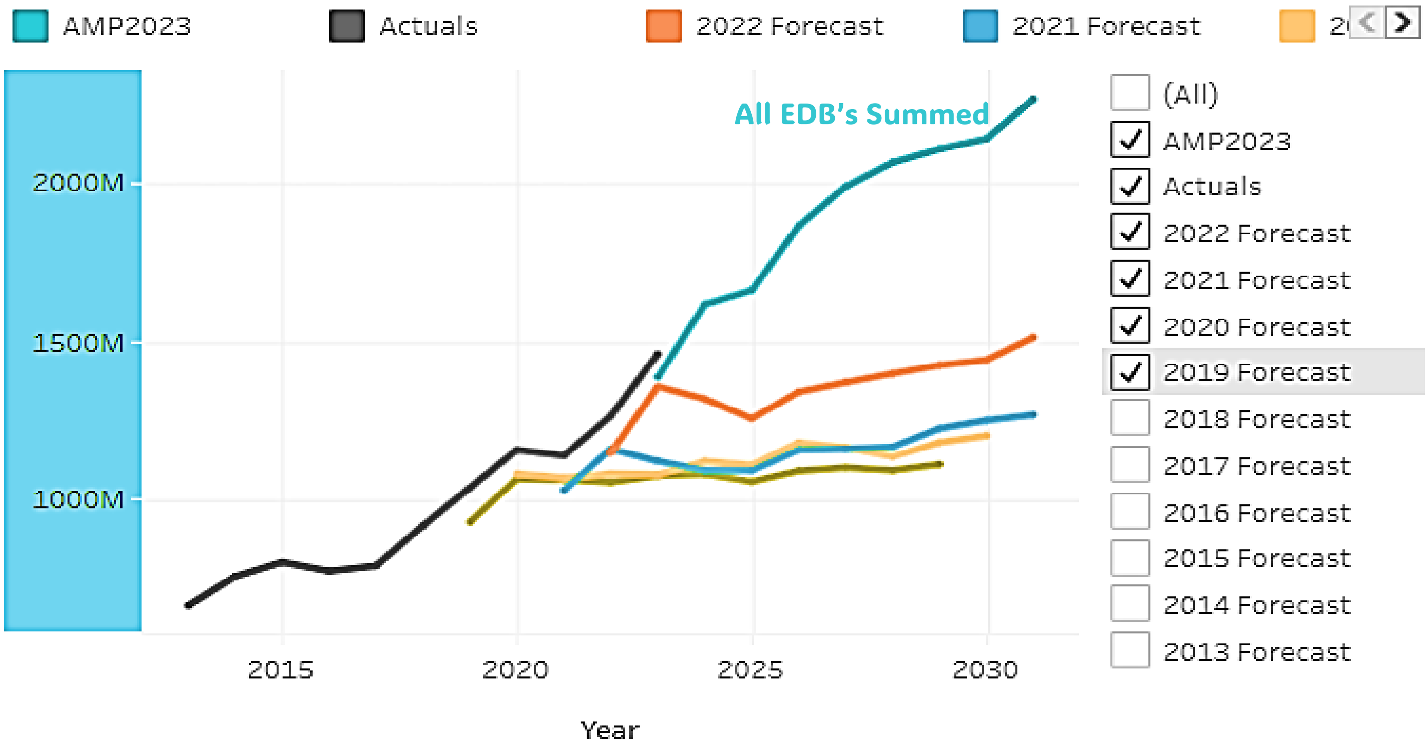
The numbers

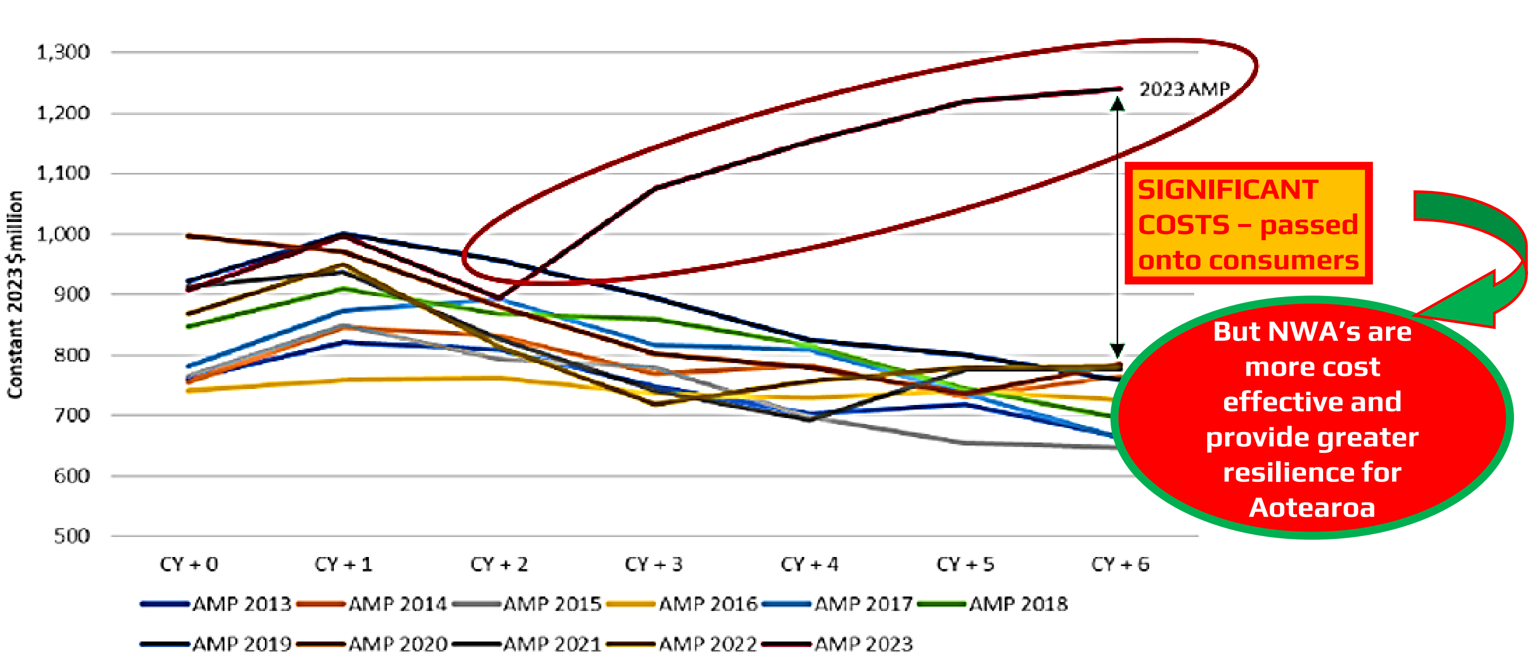
Summary: A doubling in CAPEX is proposed by



More numbers

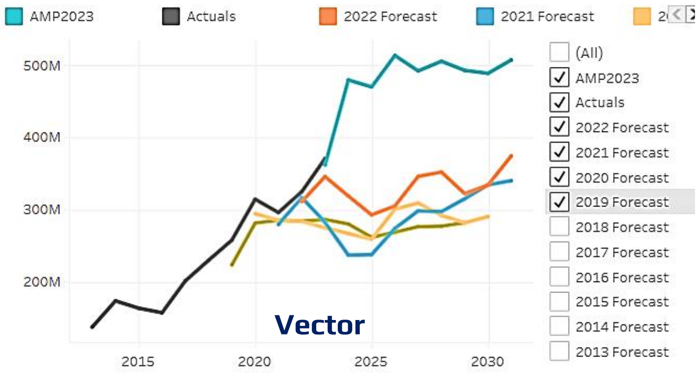
Or described in another way...

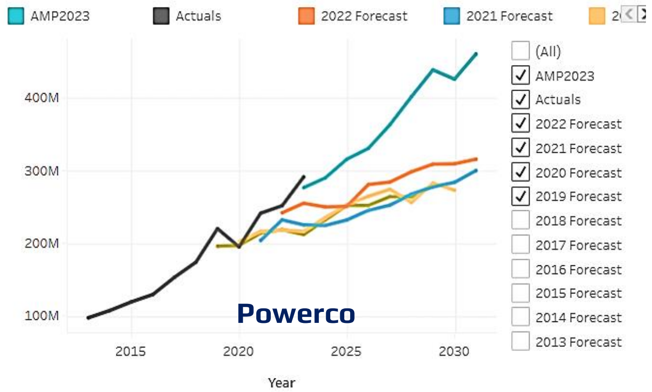
Figure E2 Comparison of capital expenditure forecasts from EDB AMPs forecasts

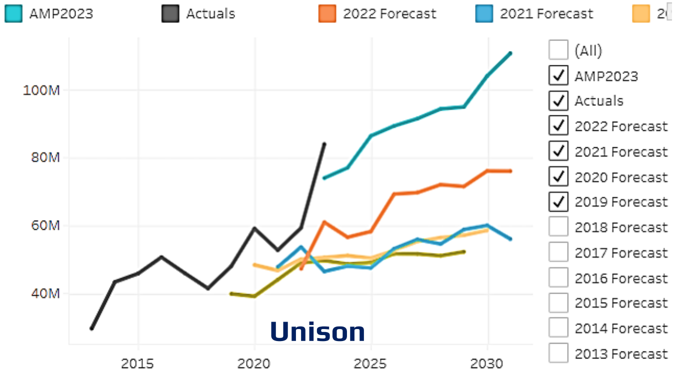


A closer look

Substantial proposed CAPEX increases…

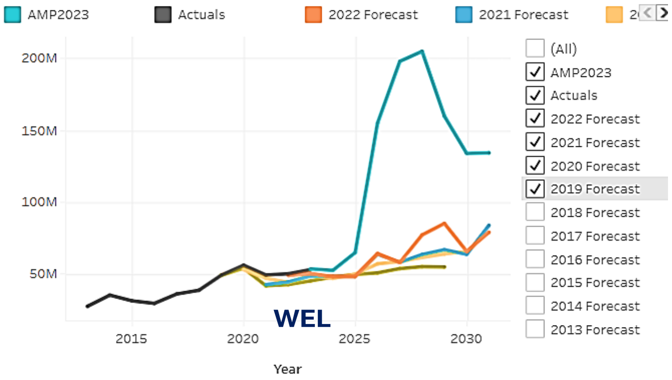


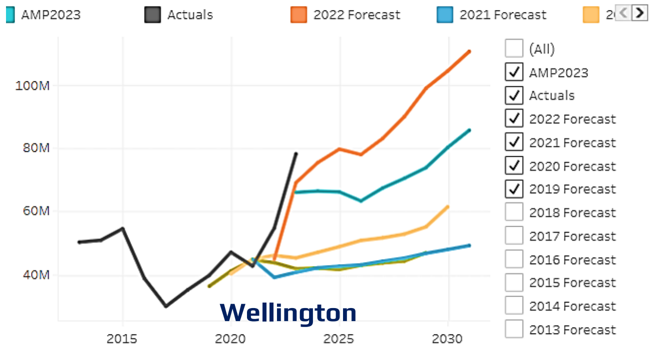


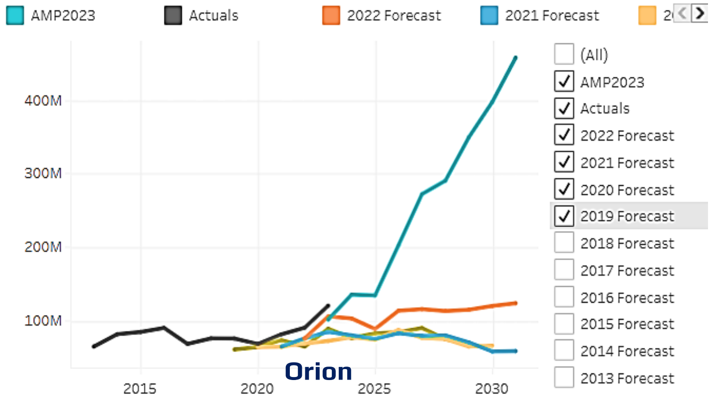


A closer look

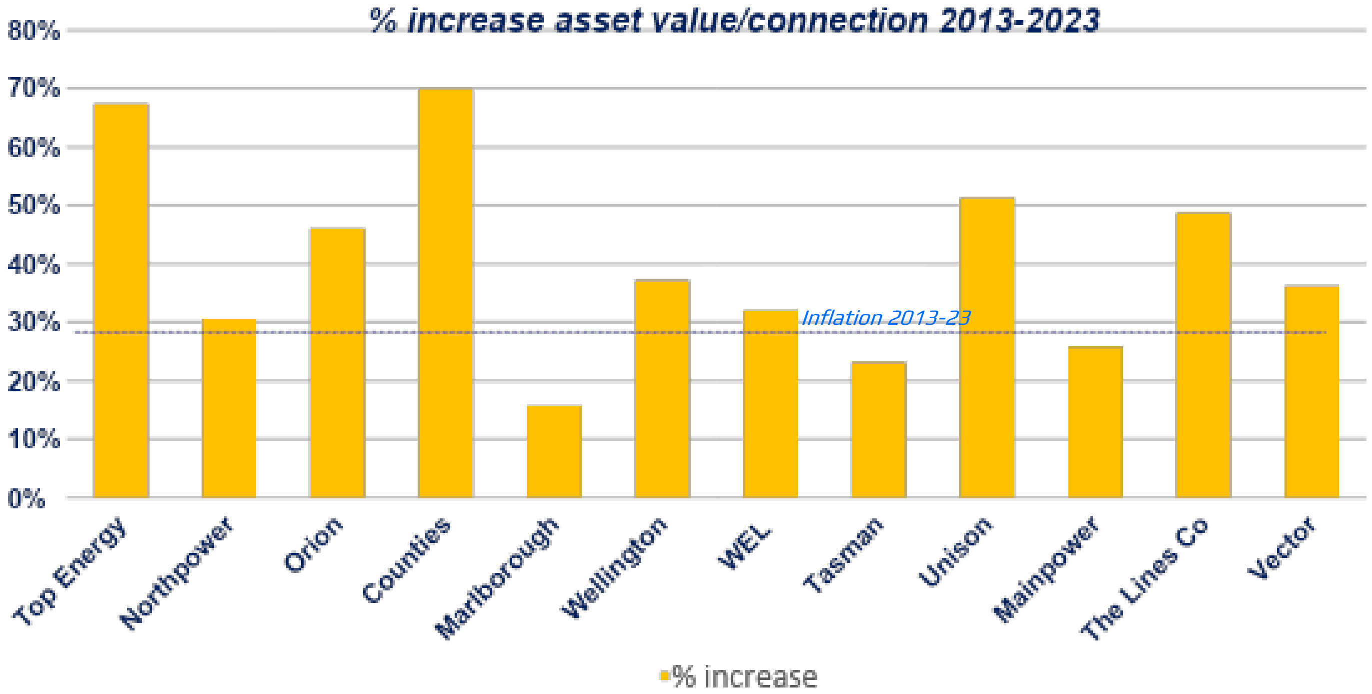
Substantial proposed CAPEX increases…







Asset value per connection percentage increase



Efficiency

Efficiency

- EDB's are incentivized to spend as much as possible on their networks, with a guaranteed return of 7% on the dollar value of their installed asset base
- Non-network solutions (or NWA) offer cost savings for customers through lower line charges
- EDB's are commercially worse off than if they spend the full allocation of CAPEX on their networks

A New Model

- Consider incentives in the form of higher returns for projects that can show a discount to the poles and wires-based solution. Example;

Current

- Poles and wires project - $1M capex cost to consumer plus associated opex costs

  EDB return – 7% of $1M over the lifecycle of the asset , depreciating in line with rules (30-year lifecycle)

  WACC applied (variable though for this example we will assume 5% fixed for 30 years)

New

- Equivalent non network solution (NWA) - $500K capex cost to consumer plus associated opex costs EDB return – 8% of $1M over the lifecycle of the asset, depreciated at poles and wires rate

Efficiency

Efficiency - Consumers will receive the benefit of the lower capex (and potentially opex) costs of the project. For this example, the following would apply

- **Standard Poles and Wires Project**

  Consumer pays $1M spread over the 30-year lifecycle of the asset plus 5% WACC and 7% revenue

Capex	$1,000,000
WACC	$ 166,663
Revenue	$ 233,328
Total	**$1,399,991**

- **Non-Network Solution (NWA)**

  Consumer pays $500K spread over the 30-year lifecycle of the asset plus 5% WACC and 8% revenue

  EDB retains the benefit for supplying the service though the customer pays significantly less overall

Capex	$ 500,000
WACC	$ 166,663
Revenue	$ 266,661
Total	**$ 933,324**

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Pricing

Transmission/distribution at 37.5% and it's only heading one way

32%
GENERATION
Producing the electricity you use.

27%
DISTRIBUTION
Building and maintaining the power lines that transport electricity from the grid to your home.

13%
RETAIL
Your power company's operating costs.

10.5%
TRANSMISSION
Building and maintaining the national grid.

13%
GST
The GST-inclusive amount of tax we all pay.

3.5%
METERING
Reading and maintaining your electricity meter.

0.5%
MARKET GOVERNANCE
Energy efficiency programmes and the organisations that regulate the electricity industry.

0.5%
MARKET SERVICES
Organisations who operate the electricity market.

Projected Lines Charges

- Current accumulated Asset Value $17b
  (source PWC Information Disclosure Compendium December 2024)
- Forecast average Annual Capex 2025 to 2035 = $2b pa
- Asset Value in 2035 = $37b
- Annual price increase from 31/3/2025 = 8% pa
- Transmission and Network costs are 37% of bill currently
- Assume non-network component increases at 3% (historic average)
- **Resultant cost increase for transmission and network projected to be at 50% of average consumers bill by 2035!**

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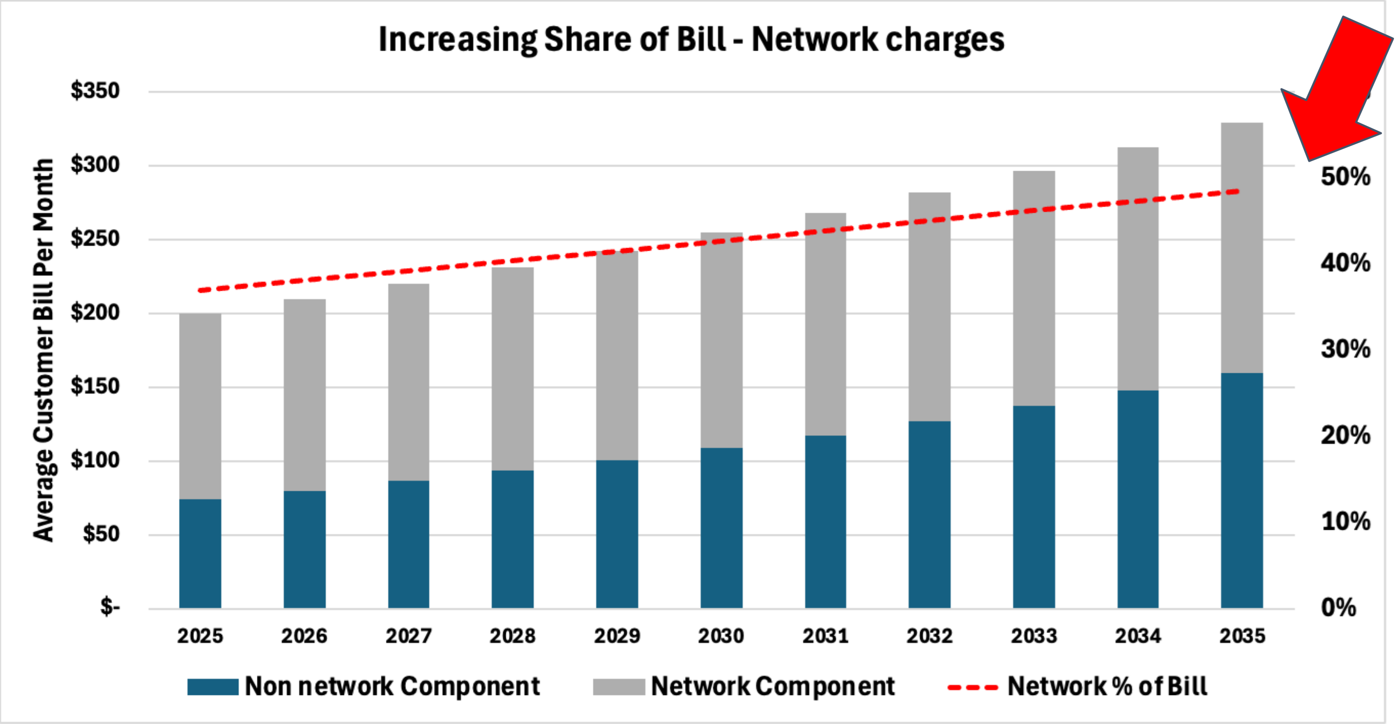
Projected Lines Charges



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Significant changes to EDB Pricing

Low user charges are being rolled back but are still under some level of control

There has however been significant and concerning changes to the Standard tariffs – which is where all customers will end up post 2027

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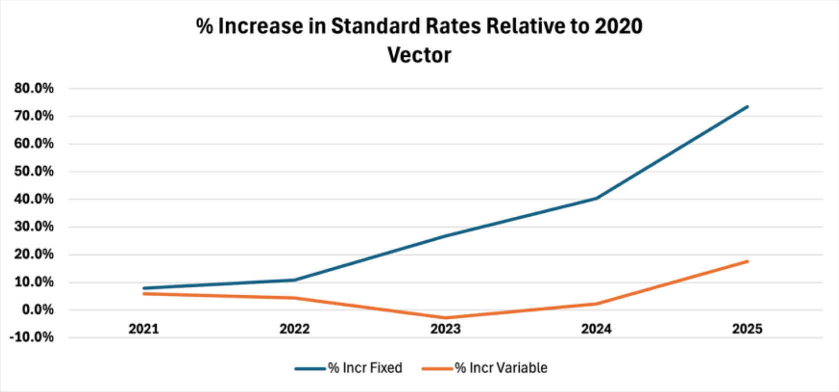
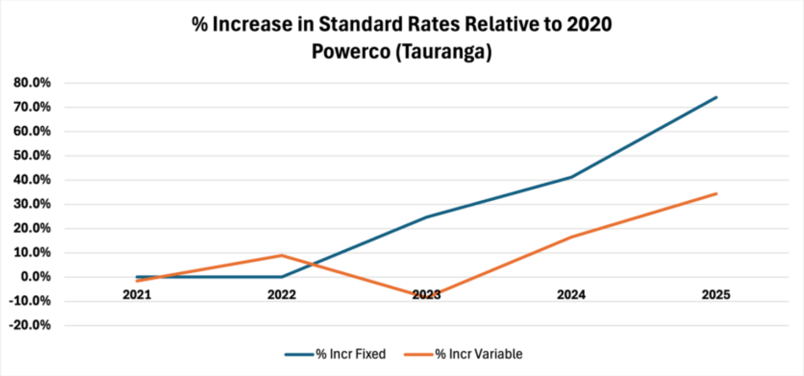
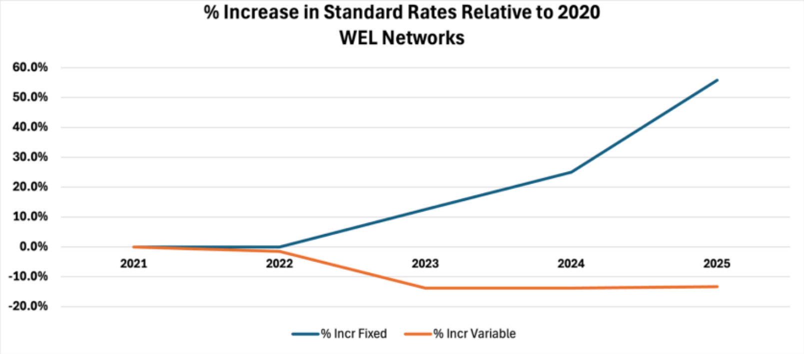
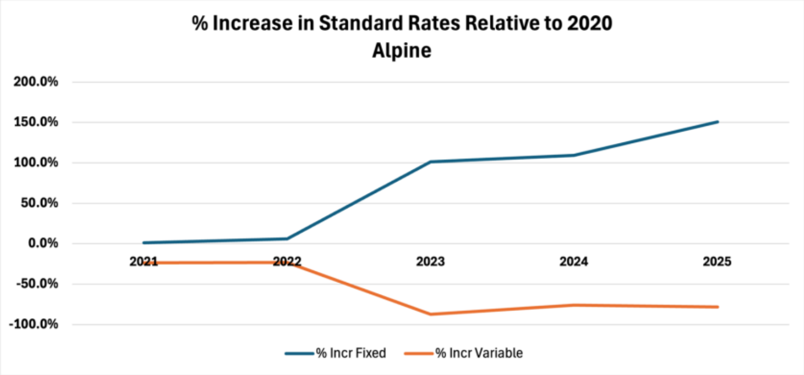
Majority of pricing increases have been applied to fixed charges









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Majority of pricing increases have been applied to fixed charges

2024_plan_id	% fixed	2024 Daily	2023 Daily	Daily Change	2024 Variable	2023 Variabe	Variable Change
Alpine Energy (High Cost Area)_015HCA_IN_2024	93%	$ 2.93	$ 2.79	5%	$ 0.0100	$ 0.0062	62%
Network Waitaki_15U_UN_2024	91%	$ 3.29	$ 2.80	17%	$ 0.0149	$ 0.0149	0%
Marlborough Lines (Urban)_DS15TOU_UN_2024	91%	$ 2.45	$ 1.98	24%	$ 0.0117	$ 0.0598	-80%
Mainpower_MPAISTD_IN_2024	90%	$ 2.79	$ 2.51	11%	$ 0.0140	$ 0.0111	25%
Northpower_DM7-TOU_UN_2024	79%	$ 2.10	$ 1.80	17%	$ 0.0260	$ 0.0278	-7%
Wellington Electricity Lines_RSUTOU-AI_IN_2024	78%	$ 1.25	$ 1.23	2%	$ 0.0163	$ 0.0148	10%
Horizon Energy (Urban-Rural)_NDU-TOU,NDR-TOU_UN_2024	76%	$ 1.63	$ 1.27	29%	$ 0.0236	$ 0.0404	-41%
Eastland_DOMSTD_UN_2024	73%	$ 2.18	$ 2.00	9%	$ 0.0362	$ 0.0339	7%
Marlborough Lines (Rural)_DSR15_UN_2024	70%	$ 3.11	$ 2.57	21%	$ 0.0622	$ 0.0598	4%
Electra_XTF_UN_2024	66%	$ 1.74	$ 1.31	33%	$ 0.0402	$ 0.0585	-31%
Vector (Auckland)_ARHSU_UN_2024	66%	$ 1.43	$ 1.30	10%	$ 0.0341	$ 0.0332	3%
Electricity Invercargill_ND20P_UN_2024	65%	$ 1.32	$ 1.16	14%	$ 0.0322	$ 0.0323	0%
Nelson Electricity_2P_UN_2024	65%	$ 1.19	$ 1.07	11%	$ 0.0289	$ 0.0268	8%
Unison (Hawke's Bay)_H-THU_UN_2024	61%	$ 1.35	$ 1.22	11%	$ 0.0386	$ 0.0472	-18%
WEL Networks_1154_UN_2024	61%	$ 1.50	$ 1.35	11%	$ 0.0438	$ 0.0409	7%
Top Energy_SC_IN_2024	58%	$ 1.90	$ 1.50	27%	$ 0.0640	$ 0.0769	-17%
OtagoNet_1A,1B_UN_2024	57%	$ 1.75	$ 1.52	15%	$ 0.0601	$ 0.0603	0%
Powerco (Tauranga)_T06S_UN_2024	55%	$ 1.20	$ 1.06	13%	$ 0.0443	$ 0.0447	-1%
Centralines_CH2T_UN_2024	55%	$ 1.75	$ 1.50	17%	$ 0.0659	$ 0.1093	-40%
The Lines Company (High Density)_RTSTDHC_IN_2024	54%	$ 1.50	$ 1.00	51%	$ 0.0577	$ 0.0742	-22%
Network Tasman_1RS_UN_2024	54%	$ 1.12	$ 1.06	6%	$ 0.0438	$ 0.0444	-1%
Counties Energy_RSUC_UN_2024	53%	$ 1.80	$ 1.65	9%	$ 0.0738	$ 0.0814	-9%
Buller Electricity_RSU_UN_2024	49%	$ 1.70	$ 1.49	14%	$ 0.0814	$ 0.0748	9%
Westpower_WP1D_UN_2024	43%	$ 1.41	$ 1.15	23%	$ 0.0839	$ 0.0795	6%
AVERAGE				**17%**			**-5%**

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Many have low incentives to move usage away from peaks

	Peak / Off Peak Differential
Mainpower	0
Alpine	0.0022
Network Tasman	0.0212
Network Waitaki	0.0298
Horizon	0.05842
WEL (Hamilton)	0.0737
Firstlight	0.0753
Wellington	0.0765
Aurora (Central Otago)	0.1
Marlborough Lines	0.1049
Top Energy	0.11
The Lines Compnay	0.11
Vector	0.1131
Orion	0.11876
Powerco (BOP)	0.1283
Northpower	0.1296
Unison (HWK)	0.134
Electra	0.1363
Waipa	0.2405
Counties	0.2908

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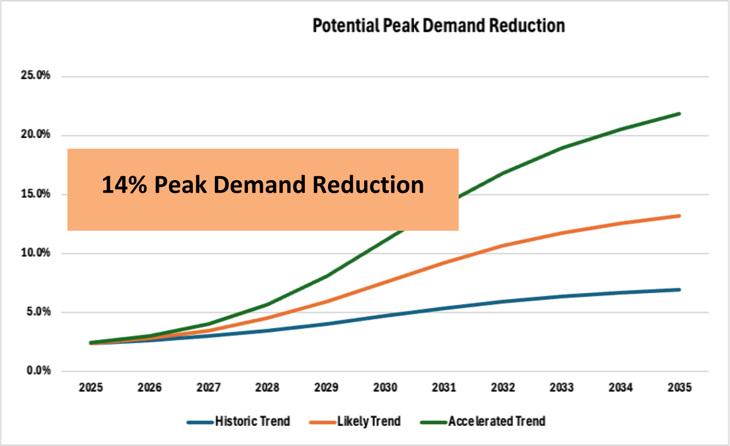
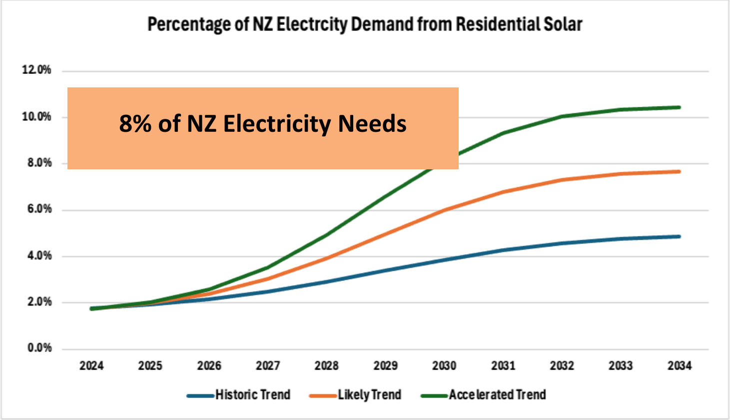
Impact of Residential Solar and Storage

Historic Trend
No significant change from existing, slight increase in install rates and battery attachment as prices slowly fall (10% penetration by 2035)

Likely Trend
Ongoing panel price and battery price falls results in increasing uptake rates and batteries installed more often to manage TOU prices (15% penetration 2035)

Accelerated Trend
Access to 10-year finance and falling system costs, (especially battery storage), together with concerns of ongoing electricity price increases and storm driven reliability results in a surge in demand (still 50% less than peak install rates seen in Australia). (20% penetration in 2035)





Aotearoa NZ's Key Electricity Work On's

1. Supply prices are high and rising with EDB network increases around the corner
2. Industrial operations closed their doors last year
3. Likely more industrial and commercial business will come under pressure
4. Greater stress on residential households with absolutely no additional budget to meet increasing costs
5. Increasing energy poverty as a result
6. Aotearoa NZ is in an uncomfortable position - the crystal ball
    - Affordability of delivered electricity - April 1st 2025 → its only going 1 way!!
    - Dry year risk
    - EDB regulatory management to help develop other alternatives
    - Accessibility of data from smart meters to enable helpful processes and outcomes around supply
    - Protocols for interoperability

Lower delivered cost electricity Impacts on NZ Productivity

1. Creates higher productivity through greater output, which leads and contributes to economic growth by creating more employment

1. Encourages and attracts FDI as companies seek locations with lower operating costs. Greater investment enhances infrastructure, technology adoption and productivity growth

1. Impacts local SME businesses as most operate on tight margins and seek expense reduction across P&L. Greater margins means business preservation & continuity when economy is low

1. Boosts agricultural productivity with lower costs of irrigation, processing and storage, leading to greater productivity and reduced post-harvest losses

1. Digital economy impacted with growth of tech-driven industries and services that rely heavily on consistent lower cost energy ⍰ Aotearoa's developing Data Centre's

1. Improved public services hospitals, schools, tertiary operate more efficiently with lower electricity costs, enhancing overall economic productivity

Higher delivered cost electricity Impacts on NZ Economic Growth

- **Reduces Competitiveness for Manufacturers / Exporters**
  - Higher production and operating costs: Does not enable exporters to produce lower cost goods, products less price competitive on global market where typically price competition is fierce
  - Lower net profit: Higher energy costs lessen P&L and BS net equity so lessens financial stability, lessens investment in expansion and/or innovation which creates more employment/jobs
- **Dis-incentive for Increased Production**
  - Lessens industrial and production output as higher net electricity prices provide dis-incentive for business to increase production levels given cost of operating hardware/machinery/facilities is not reduced. No increase in the overall output of goods
  - Discourages new investment for both domestic and FDI - lessens expansion of capacity, innovation, employment creation
- **Economic Growth and Job Creation opportunity lessened**
  - Reduced industrial and commercial activity – no reduction in electricity and supply costs compromise output, which lessens economic growth.

Higher delivered cost electricity Impacts on NZ Economic Growth

- **No overspill and follow-on to other sector**
  - Typically, more output in the industrial and large commercial sector means greater demand for raw materials, logistics and other services. Across the economy, other sectors benefit - transportation construction and retail.. But not if we have higher delivered electricity costs
- **Inflationary Impact and Consumer Benefit is minimised**
  - Short term impact of reduced prices can lower overall cost of living, which can reduce inflationary pressure. Consumers spend less on energy bills; they have more disposable income to use elsewhere, boosting consumption – which won't happen
- **Supply-side Impact**
  - Lower energy prices reduce cost of producing goods and services across the economy, helping reduce overall inflation won't occur

Commerce Commission Possible To Do's

Top 5 Suggestions :: Commerce Commission	
1	Potential mandated process for properly considering NWA's
2	Consider improving incentives for EDB's to utilise NWA's
3	Establish detailed assessments of EDB efficiency / productivity and link to future DPP's
4	Implement multi trader relationship rules (is this Comcom or EA)
5	Implement +/- 10% network voltage change ASAP

Electricity Authority Possible To Do's

Top 5 Suggestions :: Electricity Authority	
1	Review EDB pricing rules relating to proportion fixed and pricing methodology to ensure truly cost reflective
2	Consider mandating retailers to pass through EDB charges transparently
3	Mandate methodologies for EDB's considering DER hosting and limits
4	Consider making HHR meter data freely available to EDB's
5	Consider 3-phase net metering, virtual net metering/ local use of network tariffs to provide fair reflection of DER value

SEANZ To Do's

Top 5 :: SEANZ	
1	Provide input to support EA / Comcom projects as required
2	Source data / perspectives / case studies from members to provide input to projects
3	Provide feedback on proposal consultation documents
4	Continue to raise issues experienced by SEANZ members which appear to be inconsistent or unfair
5	Work collaboratively with the broader electricity industry to influence change

SEANZ
Sustainable Energy Association New Zealand

Energy Competition Taskforce Possible To Do's

Top 4 Suggestions :: Energy Competition Taskforce	
1	Mandate retailers to pass through lines changes directly (otherwise end consumer does not see the price signal)
2	Mandate EDB's to have pricing which reflects their demand profile. (eg if ratio of off peak to peak demand is only 30% then only 30% of their tariff cost can be a fixed charge
3	Mandated terms of trade with EDB's/retailers to value export from commercial BESS including from embedded networks
4	Mandate retailers to have option for customers to have export paid at wholesale prices? (reflective of pre-winter low lake level factors etc)

SEANZ

Grid Connection

There are a number of challenges in connecting DER to the network

Connecting DER's requires permission of the local EDB

There is inconsistency in how DER connections are considered

There is lack of information / capability to enable EDB's to properly consider network impacts so the tendency is to take an overly conservative approach

There is lack of information enabling investors in DER projects to have surety of value

Lack of information is a significant impediment

Networks generally have very little understanding of their LV networks

There is therefore no capability to:

- Assess the impact of connection of DER
- Properly understand investment needs
- Assess and define flexibility services to avoid network investment

Voltages within the LV network are often well outside the regulated limits (next slide)

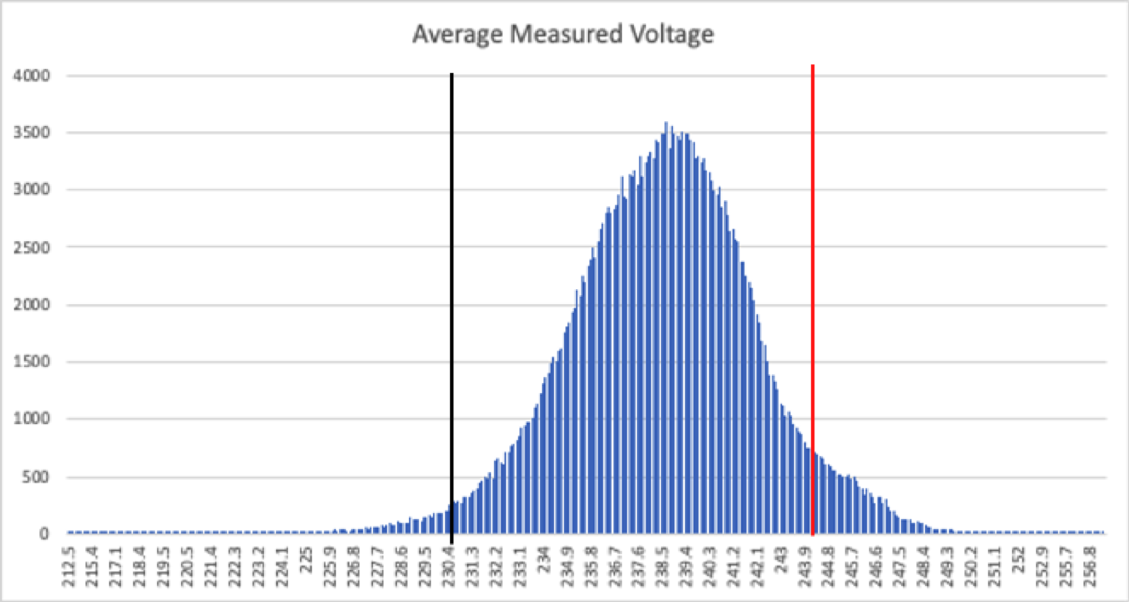
While additional monitoring could be installed (costly) the data already exists through the AMI infrastructure – but not shared with EDB's

(The sharing of metering data with customers is still cumbersome. This needs to be automated not manual)

Grid voltage is a significant issue

Based on data from installed DG the underlying grid voltages are often well outside regulated limits. We have far more data on this available…

Nov 24-25, 2023 11pm to 6am (12,000 systems)



There is poor and inconsistent assessment of DER connection approvals

Hosting capacity assessment methods vary significantly between EDB's and are mostly based on **setting overly simplified and conservative limits. These limits will significantly restrict DER uptake and value (eg it makes no sense to have export limits 24/7/365 - scenarios unlikely to occur – maximum output from all systems with minimum load)**

For new developments the process to consider integration of DER and the process to establish the new connection to the grid for the development are not considered in an integrated way. (ie the EDB connection approval for the development needs to happen first before the DER integration will even be considered)

EDB processes do not support consideration of multiple alternatives eg:

1. Where the site is supplied from the grid only.
2. Where the site is supplied from a lower capacity grid connection with on-site storage and/or flexibility to reduce peak demand.

There is inconsistent consideration of export

For new developments (buildings or secondary networks), the connection capacity can be set by export rather than import.
The lines charges however just **consider the connection capacity regardless of whether for import or export**
This unnecessarily disadvantages DER investors where the DER is connected with load (on a building) rather than DER only

In residential EDB's can set maximum DER connection sizes with no consideration of how much of the DER capacity will be exported back into the network (ie this places restrictions on what the homeowner can do on their side of the meter)

SEANZ

ELECTRICITY DISTRIBUTION…

Discussion with Electricity Authority
Commerce Commission

Thank you…

#seanz #solar #solarenergy #energystorage
#solarpower #BESS #connect #seanz members

SEANZ