

Asset Plan developments and future plans

Presentation to EEA Asset Management Forum

2nd November 2023

Sean McCready– Principal Advisor, Engineer



Outline of presentation

- Our function
- Current workplan & future development
- 2023 Asset management plan review
- Targeted information disclosure review, 2023
- Performance analysis tool and reports
- Areas of interest
- 2023 Section 53z notice



Our function



- We are an Independent Crown Entity designed to implement and enforce regulation set out in legislation. We engage and coordinate with government and other relevant agencies but are not directly controlled by a Minister.
- Commissioners are appointed by the Minister for multi year terms that can be extended. These Commissioners are formed into Divisions and delegated decision-making powers from the Board.
- The Commission has an array of roles and responsibilities and is organized into 5 operational branches:
 - Fair Trading Branch (false and misleading practices)
 - Credit Branch (consumer credit and finance)
 - Competition Branch (mergers and restrictive trade practices)
 - Market Regulation Branch (telecommunications, dairy, fuel, groceries)
 - Infrastructure Regulation Branch (electricity, gas, airports, fibre broadband, water)

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Introduction/overview to Information Disclosure



- The Commission amongst other things regulates the services provided by electricity distribution businesses (EDB), Transpower and Gas pipelines under Part 4 of the Commerce Act.¹ This is because there is little or no competition, and little or no likelihood of a substantial increase in competition in these sectors.
- A key tool in our “regulatory tool box” is the ability to impose Information Disclosure (ID) which provides transparency on the performance of regulated suppliers.
 - **Purpose of ID** – so that interested parties can have sufficient information on regulated suppliers to assess whether the purpose of Part 4 (long term benefits of consumers) is being promoted
 - **Form of ID** – varies across the sectors we regulate. For EDBs and Transpower, it consists of schedules which require the regulated party to provide regular information about financial and non-financial measures (eg quality - number and frequency of outages etc). We also require businesses in the energy sectors we regulate to release an Asset Management Plan which details their planning for the next 10 years
 - **Use of ID** – The Commission under Part 4 is required to publish a summary and analyse of ID information. In the last five years we have published numerous studies of EDBs ID data especially in relation to asset management practices
 - **History of ID**. ID for EDBs and Transpower came into effect in 2012. That means the Commission has a large amount of data that we can undertake summary and analyses of including a sufficient record of data to undertake time series trend analysis

1. for EDBs – all EDBs are subject to information disclosure regulation and 16/29 EDBs and Transpower are subject to price/quality regulation as well.

Current workplan and future developments



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Work Programme 2023/2024



Work	Q1 - 23	Q2 - 23	Q3 - 23	Q4 - 23	Q1 - 24	Q2 - 24	Q3 - 24	Q4 - 24
Input methodologies review		June draft		Dec final decision				
Targeted Information Disclosure review	March workshop		Aug draft		Jan / Feb final decision			
EDB default price-quality path reset		TBC Process paper	TBC Issues paper			May draft		Nov final decision
Transpower individual price-quality path reset			Aug proposal received			May draft		Nov final decision
Reopener applications from EDBs	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC
Review of EDB asset management plans & ID		AMPs due March	ID data due Sept					
EDB visits					TBC	TBC		

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2023 Asset Plan review



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Background



- The Commission periodically reviews AMPs in line with s53B(2)(b) of the Commerce Act 1986 to promote a greater understanding of the performance of individual regulated suppliers. The 2023 AMP Review will:
 - Inform our programme of performance analysis and the DPP4 reset
 - Help assess whether our information disclosure requirements for AMPs remain fit for purpose
- We have engaged IAEngg (Innovative Assets Engineering) to undertake the 2023 AMP review.
- Findings will be published in two stages:
 - Stage 1: Forecasting and planning analysis contained in EDBs' 2023 AMPs
 - Stage 2: Review of the current AMP disclosure requirements and a separate resilience planning assessment
- The reviews are not intended as an audit of EDB quantitative information, a physical inspection of assets, or a review of the state of an EDB's network.

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**Stage 1:
Assessment of forecasting and planning contained in EDBs 2023 AMPs**



- As part of this stage, IAEngg will:
 - Identify and analyse key drivers of change, uncertainties, and variables in financial and demand forecasts
 - Provide an opinion on the reasonableness of the expenditure forecasts, for example:
 - Identifying projects with significant uncertainty about the need for or timing of the investment for the 2025-2030 regulatory period
 - Identifying categories of cost where variances to historical levels are not well supported
 - Identify primary drivers of cost
- IAEngg has engaged with some EDBs.
 - Engagement was undertaken in September to mid-October 2023.
- The findings from this review will be considered and inform our DPP4 expenditure forecasting programme of work.
 - However, we do not expect the IAEngg analysis or level of assurance to be at a similar level to CPP proposals, which are supported by independent verification.
 - You will have an opportunity to provide feedback on the potential use of the 2023 AMP review for forecasting expenditure, as part of the DPP4 issues paper and other consultation processes related to the DPP4 reset.

**Stage 2:
AMP information disclosure requirements and resilience planning**



- Stage 2 will focus on considering the information disclosed within AMPs and the current disclosure requirements, including an assessment of resilience planning. Following receipt of these reports, we will consider whether amendments are required to our information disclosure regime and will consult as part of that process. The scope is presented below:

AMP information disclosure requirements	Resilience planning
<ul style="list-style-type: none"> a) gap analysis between ISO 55001 and Commerce Commission determination disclosure requirements b) asset management performance metrics being utilised by EDBs c) review the AMPs structure and requirements, and the role of a strategic asset management plan d) review the effectiveness of AMMAT (Schedule 14) e) identify and review AMP performance metrics f) asset planning risk and criticality assessments g) reviewing how the needs and expectations of stakeholders is included in asset planning h) recommendations on areas to improve Commerce Commission information disclosures i) development roadmap for improving and analysis of AMPs, with the aim to improve the level of assurance from AMPs, and j) spotlighting EDBs with good electricity industry practice. 	<ul style="list-style-type: none"> a) initiatives raised to improve resilience b) assessment of natural disaster risk to networks c) resilience assessment and evaluation, and d) analysis of expenditure on resilience.

Targeted ID Review - 2024



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Purpose & Timing



- To undertake a targeted review of information disclosure requirements for EDBs, focusing our efforts on making changes expected to improve the long-term benefit of consumers of regulated services in the areas relating to quality, decarbonisation, asset management and aligning ID disclosures with other rules we administer.
- **Timing**
 - August 2023: draft decision
 - September 2023: submissions
 - October 2023: cross submissions
 - Final decision: early 2024

Publications are [here](#)

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Goals of TIDR



Our draft decision is designed to improve the quality of disclosed information and prepare for the future.

We have targeted the following areas:

Decarbonisation: Expand reporting requirements to capture more information on network constraints, non-traditional solutions, and pricing;

Asset management: Refine reporting requirements on vegetation management to capture more fulsome and consistent information on EDB practices and capability;

Quality of service: Extend reporting requirements on quality of service to capture more granular information on quality and reliability of EDB services; and

Other important changes: Clarifying definitions and updating assurance standards.

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Vegetation Management



We proposed disaggregating opex disclosure for vegetation into further categories, such as:

- Service interruptions and emergencies.
- Routine and corrective maintenance.
- Vegetation management.

We also proposed further disclosure on vegetation hazards near EDB overhead circuit sites, and further disclosure on the causes of unplanned interruptions.

We've received feedback on the proposed categories and are considering further work on defining them. Some of the feedback included:

- There are auditability concerns around how to capture costs that the EDB incurs through a third party.
- The disclosure on vegetations hazards would capture a moment in time rather than risk exposure over the whole year.
- The level of disaggregation on causes of unplanned interruptions relies on subjective assessment and is unlikely to be auditable.

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Network Constraints



We proposed requiring additional disclosure on network constraints within zone substations, including:

- Detailed information on the effect that any current or forecast constraint will have on capacity.
- Geospatial data on substations and their characteristics
- Information on policies or practises EDB's take to inform and manage constraints.

The expectation is that stakeholders can better comprehend whether EDBs understand their constraints and have a plan for managing them with this information.

Some of the feedback from submitters included:

- Concerns over the definitions of some key words being too vague.
- Aligning the horizon for constraint forecasting to the AMP forecast of 10 years.
- The geospatial dataset being a point in time, and as such, of limited value.

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Non-Traditional Solutions



We proposed requiring the disclosure of investigations towards the potential for non-traditional solutions to be more cost effective than network augmentations, and vice-versa. The definition of non-traditional solutions would be:

“means a non-traditional solution to a network constraint or risk, and includes distributed generation, electricity storage, demand response and resilience measures”

We also propose requiring specific OPEX disclosures on non-traditional solutions and replacing the current references to “distributed generation” with “non-traditional solutions”.

Feedback on this generally revolved around the definition of ‘non-traditional solution’. Submitters disagreed with each other on what the definition should be, and we are considering amending the definition to be clearer.

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Performance Analysis tools and reports



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One Page Performance Summary



- At a glance metrics and measures across a range of performance outcomes
- Try to provide a broad picture for each supplier
- Updated annually



<https://comcom.govt.nz/regulated-industries/electricity-lines/electricity-distributor-performance-and-data/performance-summaries-for-electricity-distributors>

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Performance Accessibility Tool



- Uses Tableau, a data visualisation software, to present information on selected range of information disclosure data from the last 9 years.
- It covers profitability and revenue, capital and operating expenditure, and reliability
- Makes information about the performance of regulated businesses more accessible
- Updated annually



<https://comcom.govt.nz/regulated-industries/electricity-lines/electricity-distributor-performance-and-data/performance-accessibility-tool-for-electricity-distributors>

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Trends in supplier performance dashboard



- Newest tool (published Jul 2022) covers trends in average price, profitability and reliability – to be updated annually
- Uses Tableau, a data visualisation software, to present information on selected range of information disclosure data from the last 10 years.
- Able to view statistics for individual suppliers
- Accompanied by industry-level report



<https://comcom.govt.nz/regulated-industries/electricity-lines/electricity-distributor-performance-and-data/trends-in-local-lines-company-performance>

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Excel Database



- Excel file containing data from 2013 - 2022
- Include pivot table function to identify and export smaller datasets
- Updated bi-annually

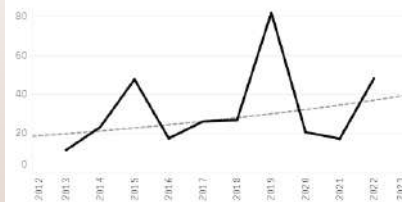
Network	Year	Value
Alpine Energy	2013	172099.838
Alpine Energy	2014	245418.642
Alpine Energy	2015	295244.938
Alpine Energy	2016	325268.978
Alpine Energy	2017	385916.647
Alpine Energy	2018	400513128
Alpine Energy	2019	121344.244
Alpine Energy	2020	121344.244
Alpine Energy	2021	121344.244
Alpine Energy	2022	121344.244

<https://comcom.govt.nz/regulated-industries/electricity-lines/electricity-distributor-performance-and-data/information-disclosed-by-electricity-distributors>

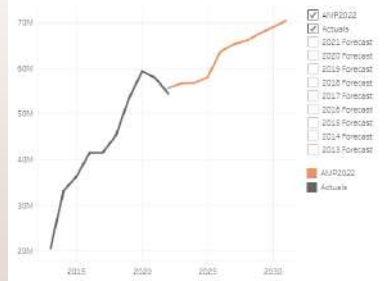
Vegetation



Category	SAIDI	% of total
Planned interruption	31.0	21.3%
Adverse environment	1.9	0.1%
Adverse weather	33.3	23.1%
Defective equipment	47.2	33.0%
Human error	1.7	0.1%
Lightning	2.2	1.5%
Third party interference	18.0	12.7%
Vegetation	48.1	33.6%
Wildlife	6.5	4.5%
Cause unknown	18.5	13.0%
Calculation anomaly	0.0	0.0%
Class B & C Interruptions	248.5	173.0%



Category	Selection	Spend	% of spend
Network opex	Service interruptions and emergencies	\$60.13M	10.0%
	Vegetation management	\$84.43M	13.6%
	Routine and corrective maintenance and opex	\$111.76M	18.0%
Non-network opex	System operations and network support	\$108.17M	17.4%
	Business support	\$154.65M	24.8%
Total operating expenditure		\$746.01M	100.0%



- Is there a correlation ?

Future areas of interest

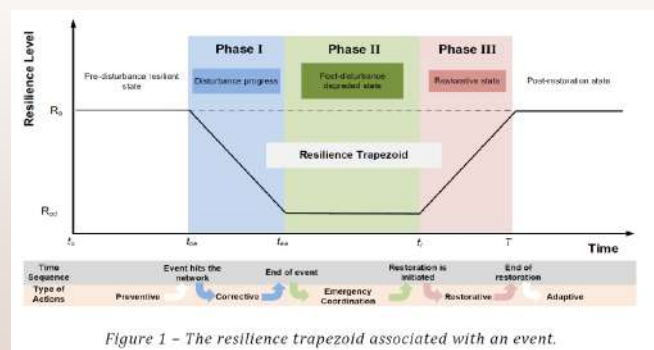
- Resilience
- Customer engagement



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Resilience

- IEEE Power & Energy Society “Resilience Framework, Methods, and Metrics for the Electricity Sector” (PES-TR83)
- Defines resilience – *“The ability to protect against and recover from any event that would significantly impact the grid”*



IEEE Power & Energy Society “Resilience Framework, Methods, and Metrics for the Electricity Sector, Pg. 9

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Resilience

Quantitative framework

- An effective resilience framework should strive to minimize the likelihood and impacts of a disruptive event and provide the right guidance and resources to respond and recover effectively and efficiently when an incident happens. It should also have a feedback loop to foster continuous improvement.
- The process starts with identifying critical functions, systems, and resources and the hazards and threats that could impact them.
- Next, the process determines the appropriate risk mitigation approach by developing prevention, protection, and/or mitigation strategies to reduce those impacts.
- For those risks and impacts infeasible to mitigate, EDBs execute activities to manage the system performance's degradation to recover from those disruptions.

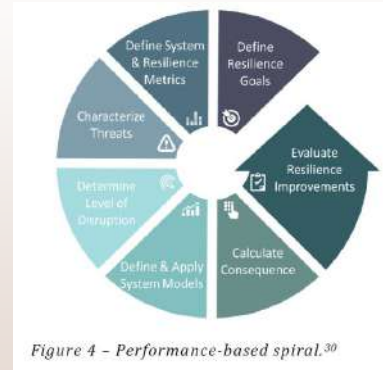


Figure 4 - Performance-based spiral.³⁰

IEEE Power & Energy Society "Resilience Framework, Methods, and Metrics for the Electricity Sector, Pg. 11

Customer Engagement

From ISO 55000:

4.2 Understanding the needs and expectations of stakeholders

The organization shall determine:

- the stakeholders that are relevant to the asset management system;
- the requirements and expectations of these stakeholders with respect to asset management;
- the criteria for asset management decision making;
- the stakeholder requirements for recording financial and non-financial information relevant to asset management, and for reporting on it both internally and externally.

- What makes effective customer engagement?
- How do you know you have achieved that?
- How is engagement incorporated into your AMPs or work programmes?

Customer Engagement

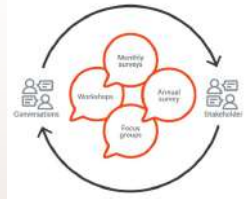
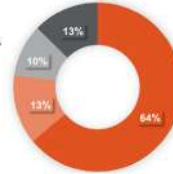


Figure 2.5: Key results from our March 2022 survey

- Reducing my home power bill - 64%
- Making my home warmer and drier - 13%
- Understanding alternative energy solutions - 10%
- Reducing my environmental impact - 13%



What matters most to you right now?

Figure 2.6: Customers' top priorities



These priorities are fundamental to how we manage and operate our network.

Customer Engagement



AMP development process

	Our board	Our leadership	Our customers
Group Strategy In line with the 2022 Group Strategy and the 2022 Business Plan, Asset Management publishes an Asset Management Strategy.	Board approves Group Strategy, SOX and group business plan. Recommen asset management strategic drivers with board.	Leadership leads strategy decisions. Link strategy to asset management.	Test asset management focus areas with customers. Customer Advisory Panel consultation.
Monitoring performance and adjusting Track performance against and make operational adjustments to improve efficiency and manage innovation.	Recommen strategic drivers and service level adjustments. Progress update on AMP.	Review actual vs forecast expenditures, review asset value models & report on reliability performance, customer service CSBM. Assess network and non-network alternatives. Assess load growth. Independent audits.	Stakeholder consultation. Incorporate customer feedback in economic analysis.
AMR/Business Cases Ensure data systems, analysis tools, reliability engineering judgement and representation of alternatives (alternatives used in reporting) are consistent with asset management decisions.	Key AMRs and Business Case as required. Ensure appropriate resource and capability.	Create/update AMRs and business case. Network level budget challenge (Budget).	Incorporate customer expectations and stakeholder interests.
AMP Estimate and prioritise the expenditure costs. With start and end terms, a key that demonstrates the cost pricing alternative of the network investment options.	AMP review, challenge.	Sign off AMP improvements, and key expenditure step changes (addition to board). Publish AMP. AMP presentation to staff.	Incorporate customer expectations and stakeholder interests.

How is engagement and customer expectations incorporated into your AMPs or work programmes ?

Section 53Z request



- Schedule A- Quality of service
 - **interruption** from 1 April 2019 to 31 March 2023
 - a) 'interruption identifier';
 - b) 'location';
 - c) 'start date (dd/mm/yyyy)';
 - d) 'start time (hh:mm:ss am/pm)';
 - e) 'end date (dd/mm/yyyy)';
 - f) 'end time (hh:mm:ss am/pm)';
 - g) 'SAIDI value';
 - h) 'SAIFI value';
 - i) 'number of ICPs interrupted';
 - j) 'customer interruption minutes';
 - k) whether the **interruption** was classified as a **Class B planned interruption**, **Class B notified interruption** or a **Class C unplanned interruption**,
 - l) 'interruption cause';
 - m) an explanation of the specific details of the cause, eg. for adverse weather, specific details could be 'gusts of up to 120kmph

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Section 53Z request



- Schedule B- Up to date forecast expenditure information
 - OPEX & CAPX forecast for 2024 AMP
 - most up to date forecast expenditure information
 - information relating to forecast expenditure variances between 2023 and the latest forecast
 - Schedule 11a and 11b
 - Identify the material variances in capital expenditure category
 - If required to support expenditure include Schedule 12a, 12b and 12c
 - Provide information to support forecast in the categories above the threshold

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Section 53Z request



- Attachment B: Supporting information for material variances template

System Growth

Primary driver	Accumulative total demand in 2030 (MW)	Average annual demand increment (MW)	Accumulative total forecast expenditure in 2030 (\$000)	Assumptions and comments
Electric Vehicles – Light Transport				
Process Heat				
Commercial Electric Vehicle Charging				
Small Gas Conversions				
Distributed Energy Resources				
Organic Growth				
System Security Standards				
Utility Generation Scale >1Mw				
Distribution System Operations				
Other				
Total				

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Section 53Z request



- Attachment B: Supporting information for material variances template

Asset Replacement and renewal

Primary driver	Accumulative total forecast expenditure in 2030 (\$000)	Expenditure assumptions and comments
Aging Assets		
Asset Health		
Resilience		
Safety		
Distributed Energy Resources		
Reliability		
Other		
Total		

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