Electricity Engineers' Association

HEALTH & SAFETY

Electricity Supply Industry

Safety Performance Indicators Report

Reporting period: 1 July 2023 - 30 June 2024

Contents

ESI Safety Survey Report 2023- 2024

The Electricity Engineers' Association (EEA) is pleased to present the 2023 – 2024 Electricity Supply Industry (ESI) Safety Performance Indicators Report. This report continues our commitment to supporting a safe, resilient, and continuously improving industry by providing a sector-wide snapshot of safety performance, risks, and engagement activity across New Zealand's electricity supply organisations.

This year's report builds on previous editions by expanding the scope of analysis and incorporating richer data across both lagging and leading safety indicators. It also highlights the challenges in achieving consistent, high-quality data across a diverse sector and identifies opportunities for improving how safety information is collected, interpreted, and shared.

We commend the 30 organisations that participated in this year's survey. Their contributions have enabled us to better understand not just where safety performance stands today, but how we can collectively raise the bar for the future. The findings underscore the importance of proactive engagement, capacity management, effective causal analysis, and strong compliance frameworks in reducing harm and improving operational safety outcomes.

As always, the EEA is committed to continuous improvement and sector-wide learning. We will be working closely with members over the coming year to refine the survey process, enhance data systems, and explore more dynamic and efficient ways of collecting and sharing information—ensuring this annual review remains a valuable tool for benchmarking and insight.

We thank all contributors for their transparency, collaboration, and shared commitment to safety. Accompanying this report is access to individual benchmark tables and graphs for participating companies.

For more information, or to provide feedback please contact Hayley Head, Technical Safety and Engagement Lead hayley@eea.co.nz.

Nicki Sutherland

Chief Executive EEA

Changes to the report: More data to inform continuous improvement

The Safety Performance Indicators Report have previously focused on providing data to show how the electricity supply industry is managing safety risks and outcomes over time. This year the report's scope was expanded to include to provide more insights into safety improvements at operational levels.

We hope that this will stimulate discussion among participants about their health and safety risk management, their ongoing needs, and safety options and how these national sector statistics can support participants continual improvements in performance, data collection and analysis.

Survey Snapshot

No workplace fatalities this year. The last workplace fatality was in 2021.

LTIFR at industry level is 1.0, a slight increase from 0.9 last year

Breakdown of harm is 58% no physical harm, 30% minor harm, 12% serious harm. This is the first time we have collected this level of data.

Uncontrolled energy release was the most commonly reported direct cause, at 40%, This is consistent with last year's results.

Industry Results for 2023- 2024

The table below summarises all workplace safety performance results at sector level for the reporting period 1 July 2023 to 30 June 2024.

YE June 2024	FTEs	Fatalities	LTIs	RWIs	MTIs	TRIs	LTI Days Lost	RW Days (est)	LTIFR	RWIFR	MTIFR	TRIFR	LTISR	RWISR (est)	ATLR to LTIs
Industry Total	13913	0	133	82	36	252	1293	1066	1	0.6	0.3	1.8	9.3	7.7	9.7
Generation Total	2320	0	12	1	1	14	132	13	0.5	0	0	0.6	5.7	0.6	11
Transmission Total	2074	0	8	5	18	31	131	65	0.4	0.2	0.9	1.5	6.3	3.1	16.4
Distribution Total	9520	0	113	76	17	207	1030	988	1.2	0.7	0.2	2.2	10.8	10.4	9.1
Distribution (S)	273	0	24	2	0	26	181	26	8.8	0.7	0	9.5	66.2	9.5	7.5
Distribution (M)	1895	0	33	11	6	50	171	143	1.7	0.6	0.3	2.6	9	7.5	5.2
Distribution (L))	7352	0	56	63	11	131	679	819	0.8	0.9	0.1	1.8	9.2	11.1	12.1

Key Takeouts

1. Overall industry safety is stable, but pockets of concern remain

- No workplace fatalities this year (last in 2021)
- LTIFR steady at 1.0, with Generation and Transmission consistently low (<0.5)
- Distribution (Small) is the outlier, spiking after years of decline and driving overall risk

2. Contractors and lone workers are at higher risk

- 43% of those at risk in incidents were contractors; employees were 23%
- Nearly half of incidents involved people working alone, highlighting exposure and the need for stronger oversight

3. Critical risks remain unchanged

- Uncontrolled energy release (40%) continues to be the leading direct cause
- Capacity issues (41%) — such as fatigue, stress, or competence gaps — are the most common indirect cause. These systemic risks require leadership attention

4. Severity trends are uneven

- While most sectors are managing severity, Distribution (Small) showed a sharp spike in 2023, indicating a cluster of serious events
- This reinforces the need to prevent not only frequent but also high-severity outcomes

5. Engagement strong, but gaps in training and reporting

- 11,000+ in-person engagements and strong public outreach reflect positive safety culture
- However, training coverage is inconsistent (some at 100%, others far lower), drug and alcohol testing has dropped (20% of FTEs tested, 2% positive), and corrective action reporting lacks clarity

The industry is broadly safe and improving, but risks are concentrated in small distribution companies, contractor oversight, and systemic causes like fatigue and uncontrolled energy release. CEOs should focus on lifting training coverage, strengthening contractor management, and improving data consistency to drive the next step change in safety.

Industry Participation

A total of 30 returns this year compares with 34 returns for the previous year. Five returns are from Generation, one from Transmission, and 24 returns are from the Distribution sector.

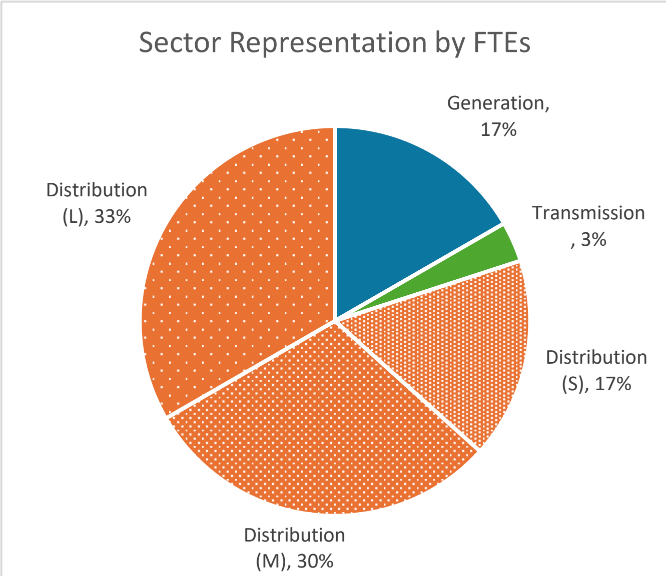
As with previous years the distribution sector has been split into three categories; large (>251 employees/contractors) medium (101-250 employees/contractors) small (0-100 employees/contractors)

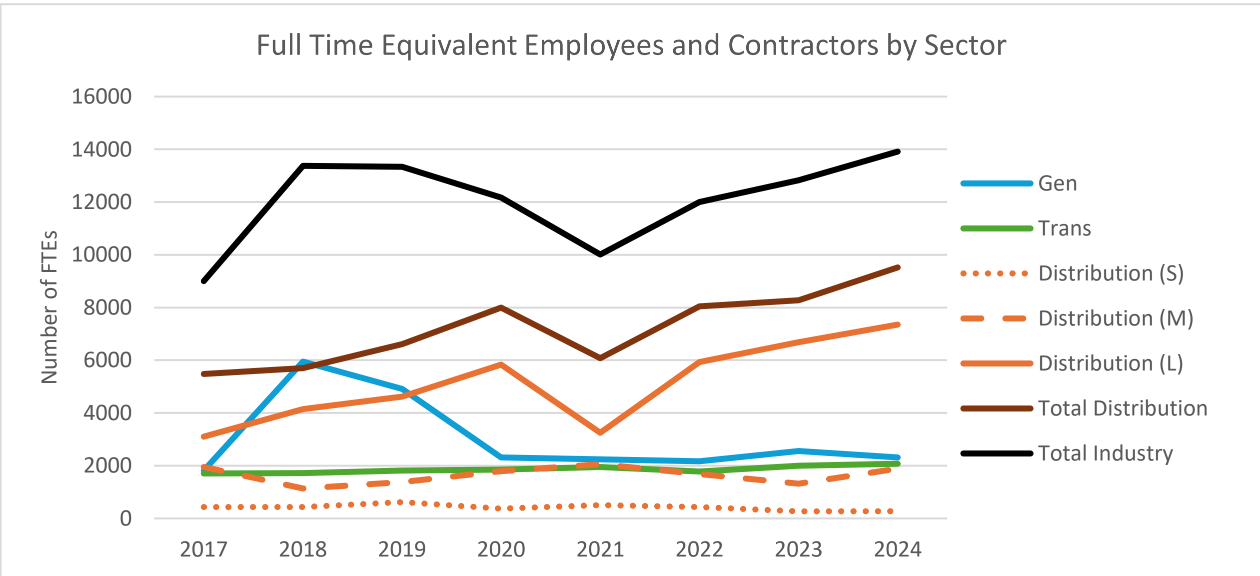
Ongoing participation in the survey is vital to maximise the value of the data for all who participate and for the benefit of industry as a whole. A balanced representation from each of the sectors and peer groups are equally important.

Industry Representation

Full Time Equivalent (FTE) Totals

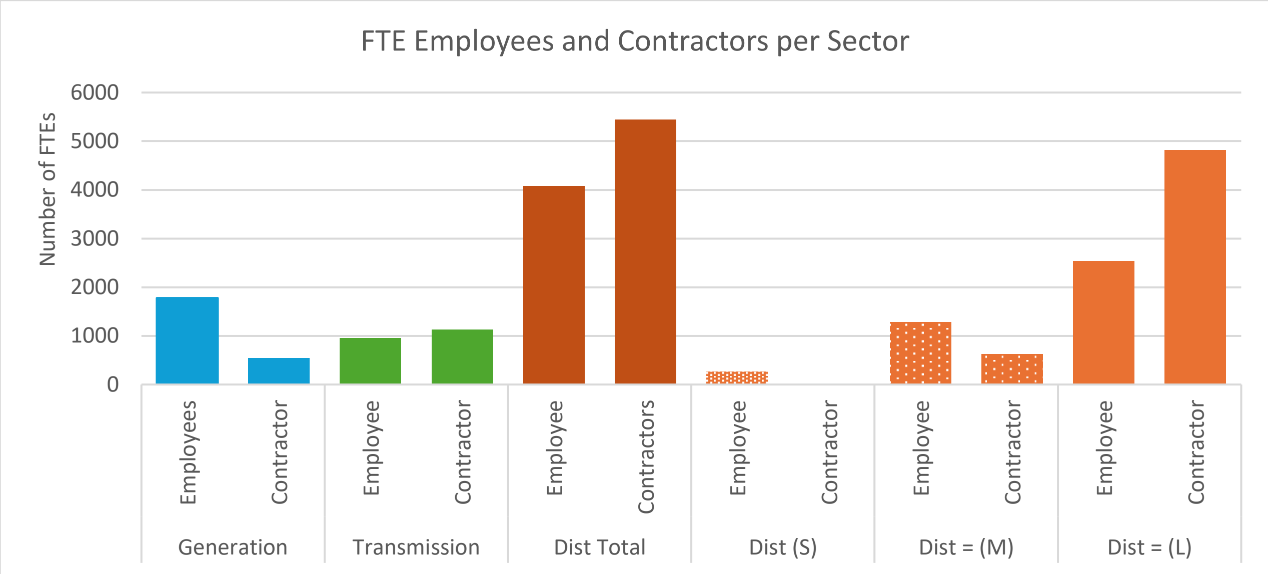
The total number of FTEs reported through the survey is 13,913, an 8.5% increase on last year's total FTE's which was 12,822 (from 34 returns). Total FTE's have been trending upwards since 2021 and are the highest since before 2017. This trend of rising FTEs may continue in the next decade as industry adds new people and assets to deliver on decarbonisation and asset replacement work.





Full Time Equivalent Employees vs Contractors

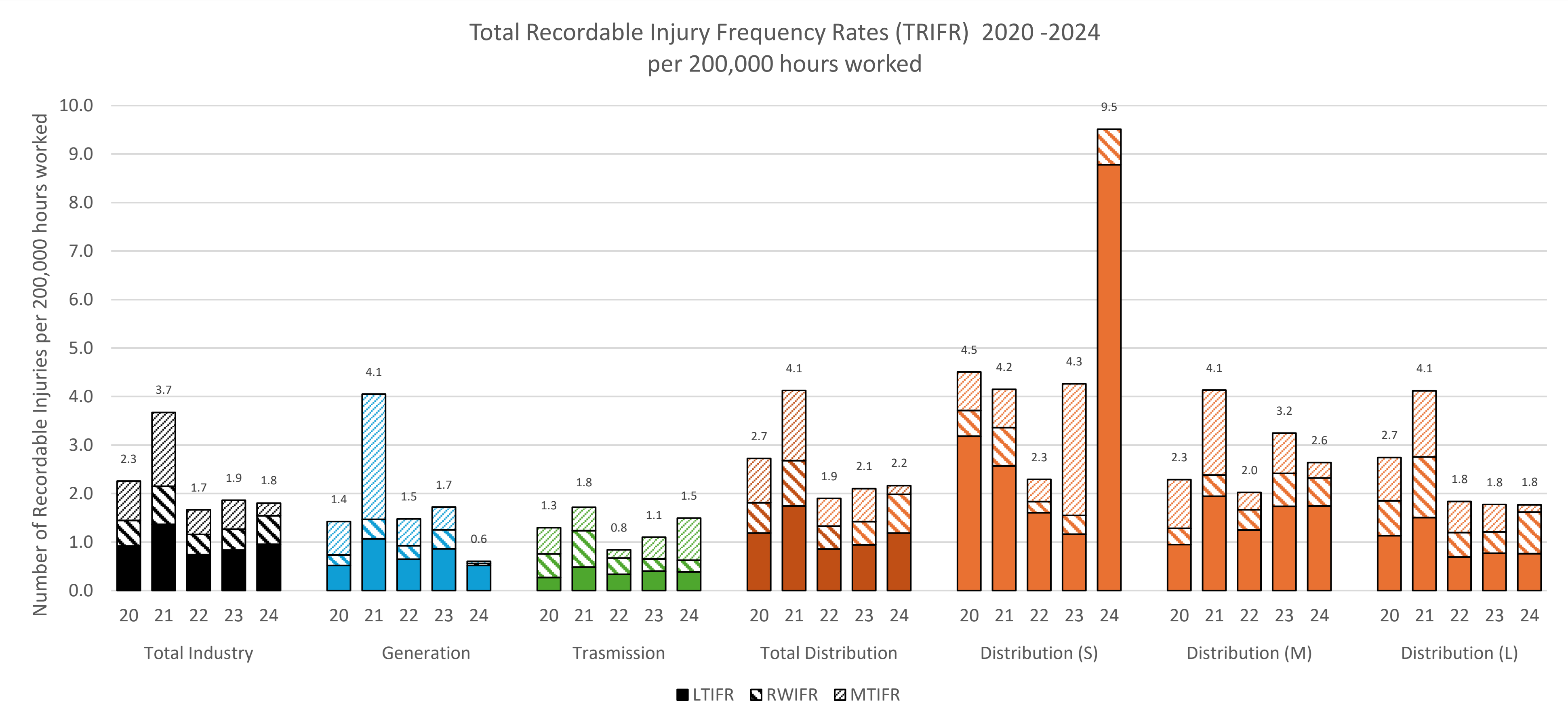
FTE employees reported through the survey total 6,804, with 60% of these working for the distribution sector. Just under half of the reported workforce are employees (vs contractors). Over half of the total reported FTEs work for larger distribution companies, with generation making up 17% and Transmission 3%. FTE contractors reported through the survey total 7,109, with 77% of these working for the distribution sector. Just over half of the reported workforce are contractors (vs employees).



Lagging Indicators

Total Recordable Injuries

One of the key performance metrics traditionally analysed each year are the frequency rates and severity rates of work-related injury or illness. Lost Time Injuries (LTIs), Restricted Work Injuries (RWIs), Medical Treatment Injuries (MTIs), and Fatalities are combined as Total Recordable Injuries. The effect on work time is measured and, together with FTE numbers, is used to calculate Frequency Rates (FRs) and Severity Rates (SRs).



Key Observations:

TRIFR reached its highest levels in 2020 – 2021, with Distribution (S and M) showing the sharpest spikes above 4.0, making them the main contributors to elevated injury frequency. Generation also saw a significant peak in 2021 but improved rapidly, dropping to one of the lowest TRIFR levels by 2023 – 2024. The industry average followed a similar pattern, peaking in 2021 then steadily improving through 2024. Transmission remained consistently low and stable across all years, never exceeding 1.5.

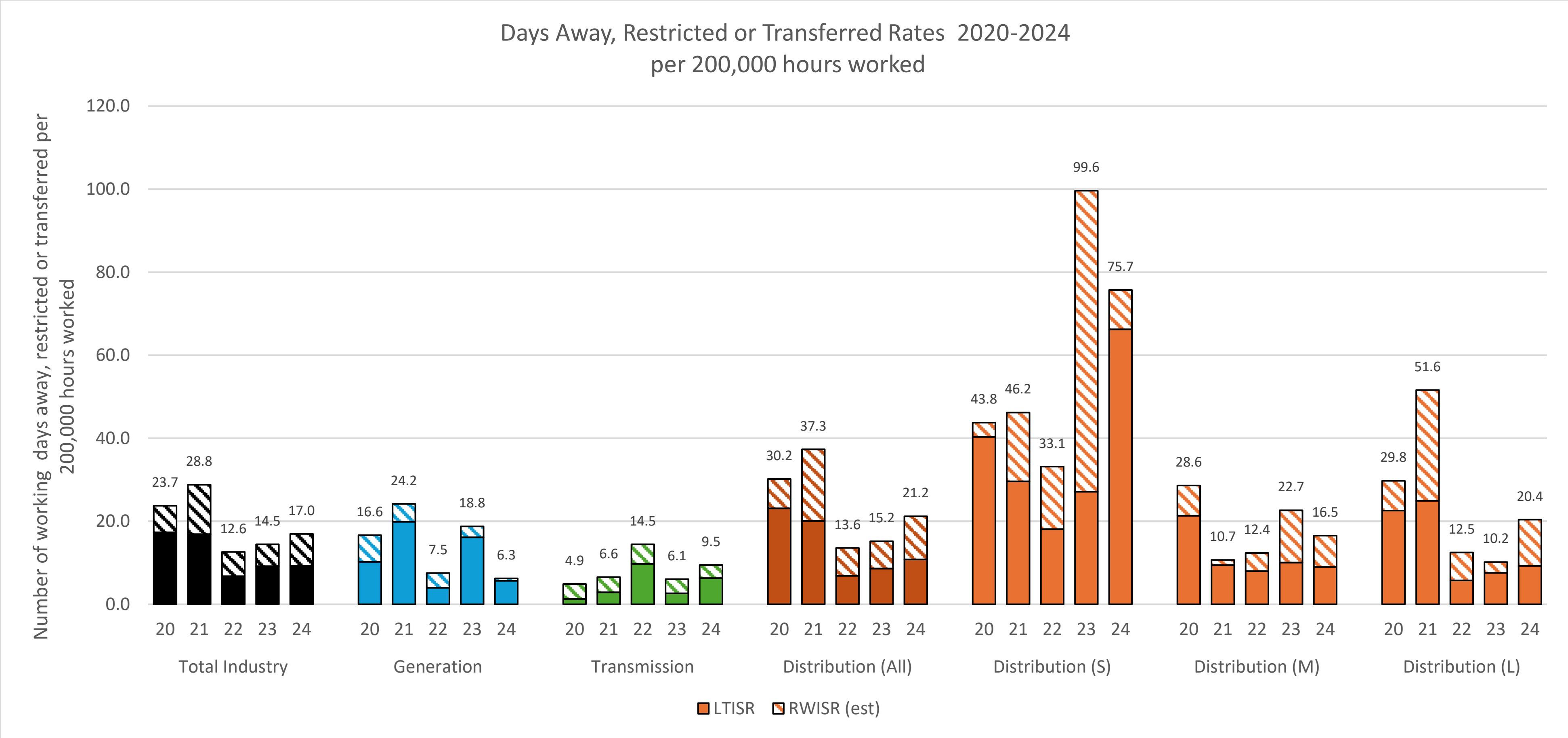
By 2023 – 2024, overall TRIFR shows a clear downward trend, but Distribution continues to stand out as the area with the highest and most variable risk.

Severity Rates

Severity rate is a measure of how serious the injuries and illnesses in a workplace are. It is calculated by dividing the number of lost workdays due to incidents by the total number of hours worked by all employees and multiplying by a standard factor of 200,000 (the estimated hours worked by 100 employees in a year).

The Injury / Illness Severity Rates graph below displays the LTISRs and RWISRs (per 200,000 hours worked), by peer group, and for the last five years (from July 2019 to June 2024). While many sectors are managing severity relatively well, the 2023 spike in Distribution (S) suggests a significant incident or a cluster of serious events.

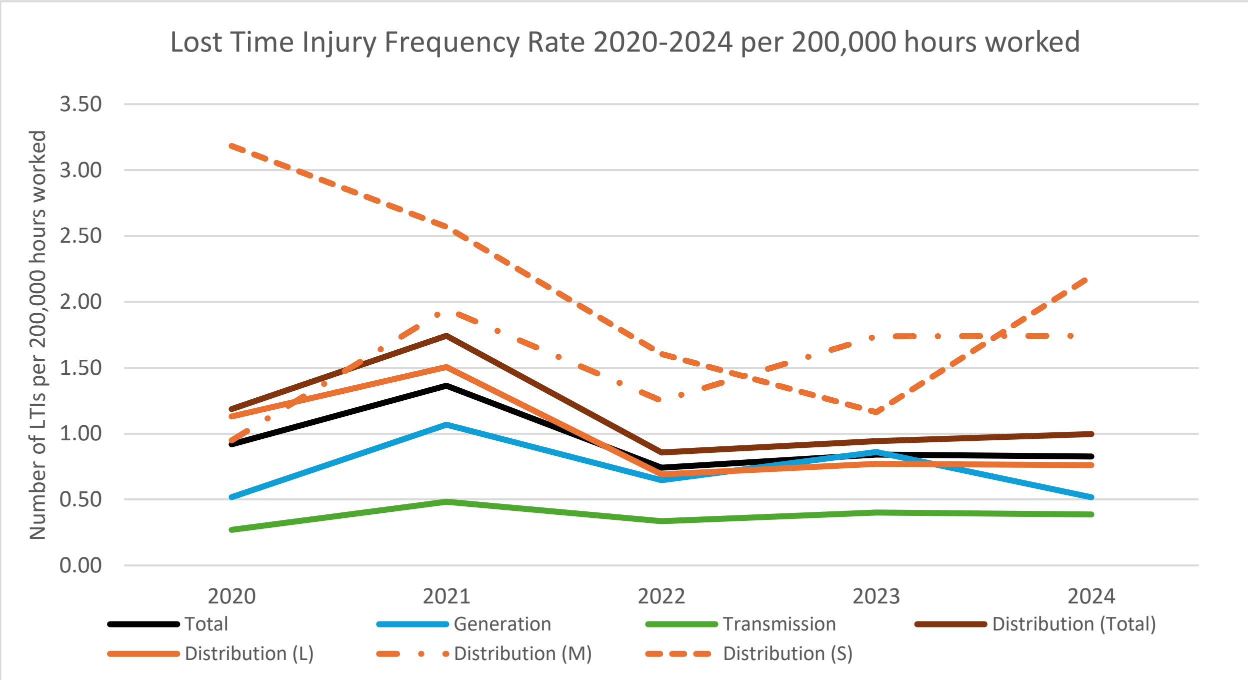
This highlights the importance of not just reducing injury frequency but also focusing on preventing severe outcomes when incidents do occur. Targeted interventions and investigations are needed in high-severity areas to drive improvement.



Key insights from Injury / Illness Severity rates

- Industry-wide severity rates have remained relatively consistent, with modest fluctuations year-on-year
- Generation and Transmission sectors continue to show comparatively low severity rates, reflecting effective incident management or fewer serious injuries
- Distribution (All) and particularly Distribution (S) show the highest severity rates. In 2023, Distribution (S) peaked at nearly 100, indicating a major increase in lost workdays or serious injuries
- Distribution (M) and Distribution (L) also show variability, with notable spikes in 2021 and 2023, though not to the extent of Distribution (S)

Lost Time Injury Frequency Rates (LTIFR) per 200,000 hours

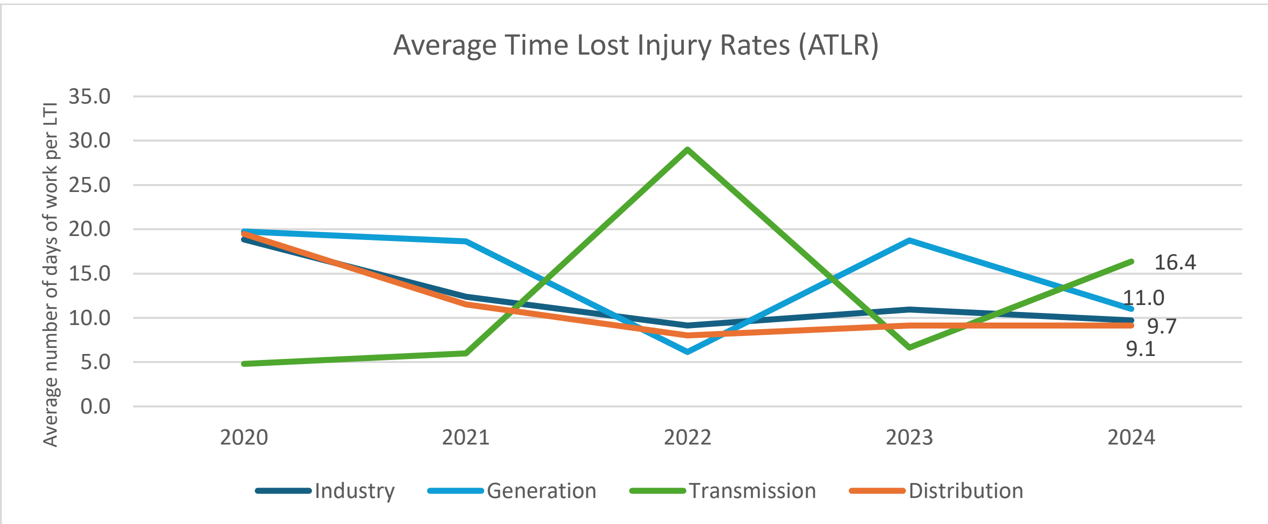


In 2023- 2024, overall LTIFR remained stable at around 0.8–1.0, with Generation and Transmission holding consistently low rates (below 0.5), Distribution–Large and Medium maintaining moderate levels, but Distribution–Small diverging sharply, spiking after years of decline and remaining the key driver of higher injury frequency.

Note: The figures are presented as actual counts rather than 3-yr rolling averages.

Average Lost Time Injury Rates (ALTR)

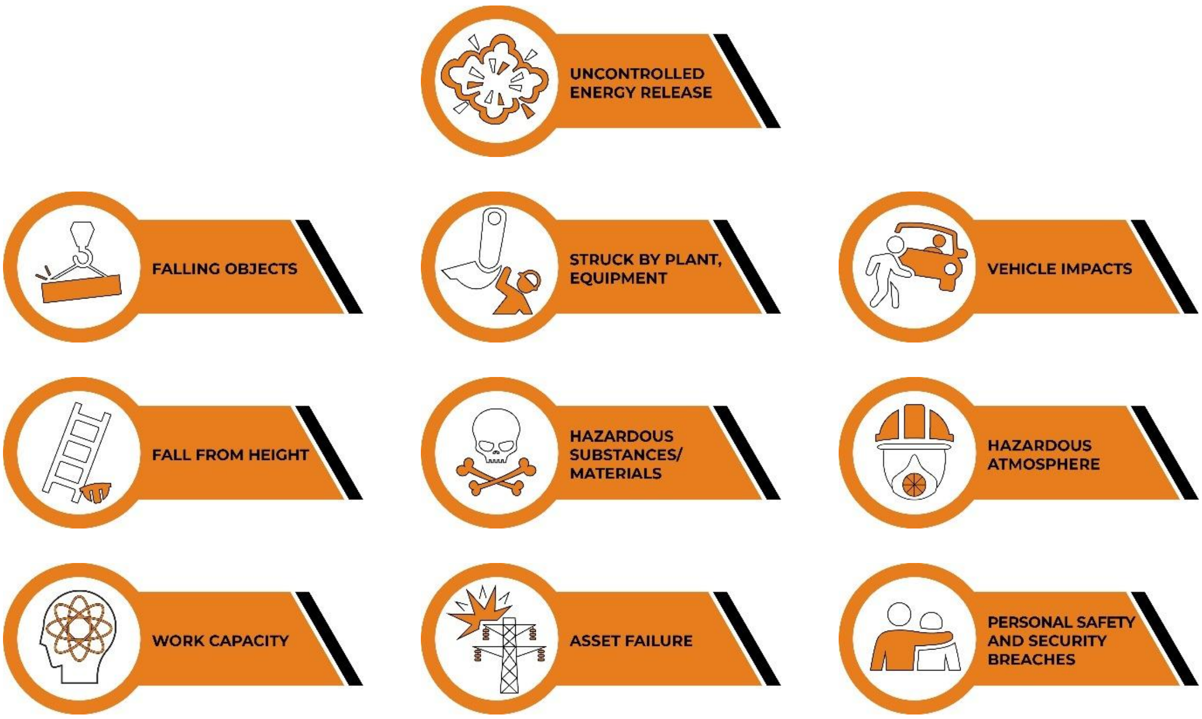
The Average Lost Time Injury Rates graph below shows trends in average time lost (to Lost Time Injuries) over the past five years. The transmission sector shows an increase over the last 12 months, while generation shows a decrease, distribution has remained the same.



Critical Risks

In 2020 the EEA published a guide on *Health and Safety Critical Risks in the Electricity Supply Industry*. Based on industry analysis, eleven key critical risks (see below) were identified. Each risk may result in fatality if not eliminated or controlled.

A key objective of the guide is to support businesses to focus on known critical risks, the associated critical controls and to monitor performance in managing these risks. Risk is dynamic and profiles change, so it is important to monitor other 'critical risks' and associated 'critical controls' to ensure they are prioritised and addressed.



In previous surveys, participants were asked about both the actual and potential consequences of critical risks. This year, the approach has been refined: while Critical Risks remain the foundation of the analysis, three areas — capacity issues, equipment failure, and asset failure — are classified as indirect causes. For example, an asset failure may result in an uncontrolled energy release, being struck by plant or equipment, or a fall.

The scope of analysis has also been expanded to distinguish between direct and indirect causes. A new category, "Harm from another source," has been introduced as a direct cause, while equipment failure has been explicitly recognised as an indirect cause.

Significant Events

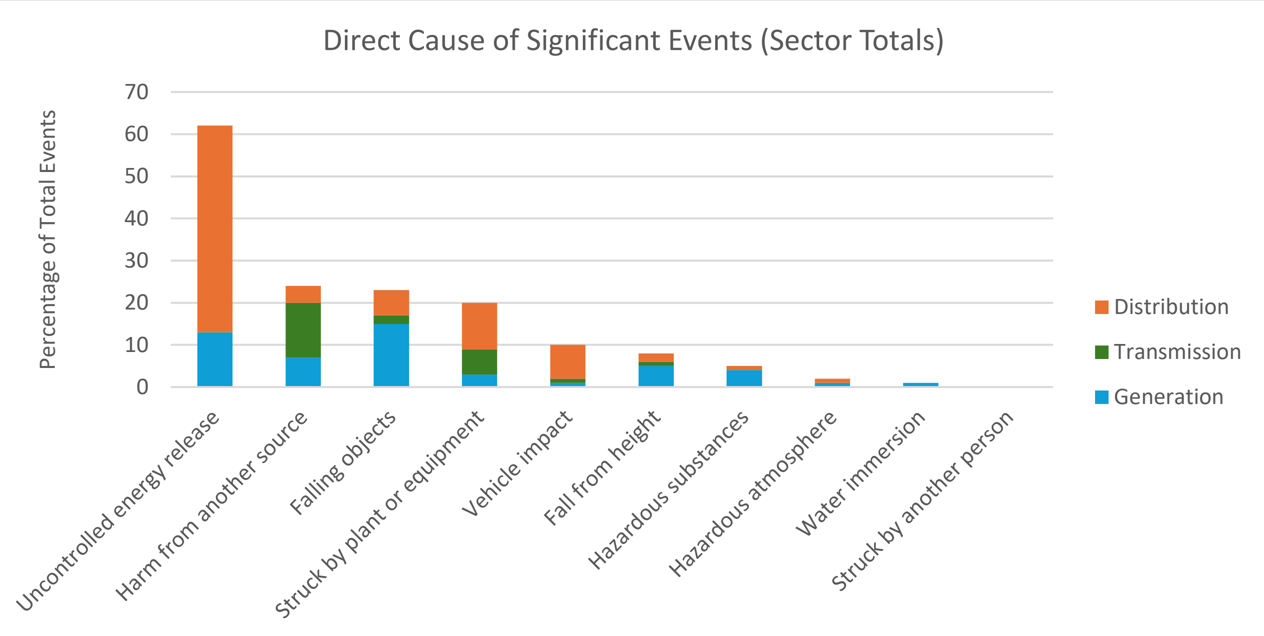
A significant event is defined as any incident or near miss that resulted, or could have resulted, in serious harm to a person, significant damage to property, or a major operational impact.

This year's report does not separate public incidents and harm from workplace incidents.

The total number of significant events reported was 176, down from 245 in last year's report.

Direct Cause of Significant Events

The most prevalent direct cause is (still) uncontrolled energy release, with "other sources" and falling objects featuring also.



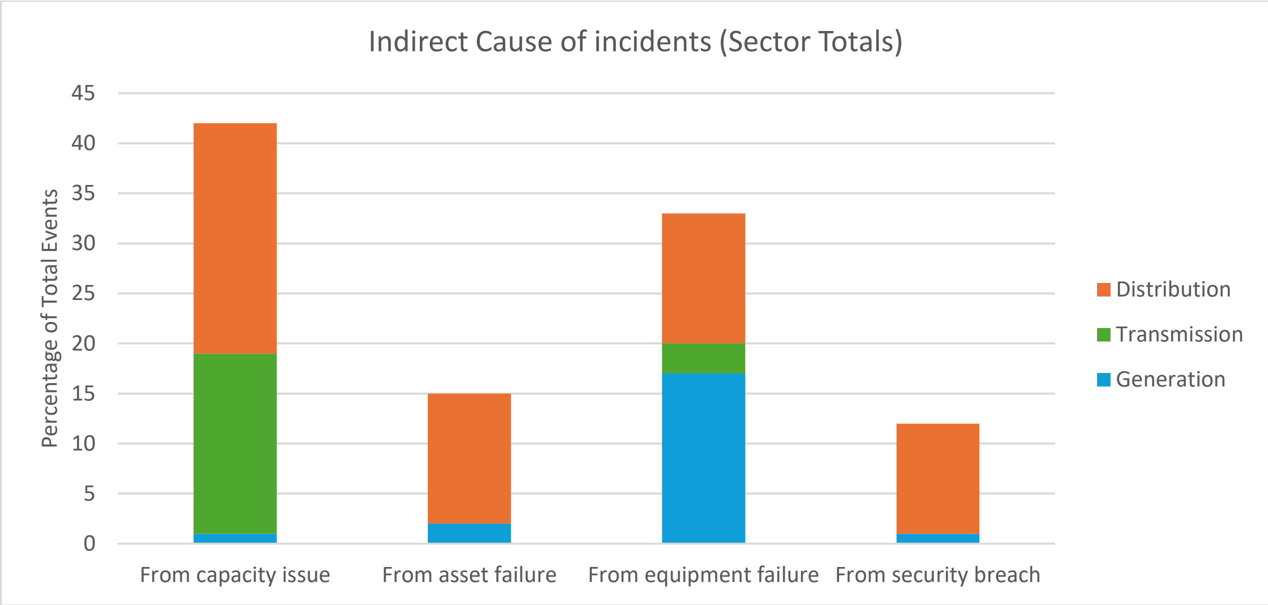
Uncontrolled Energy Release – The risk to any person caused directly or indirectly by exposure to the release of uncontrolled energy.

Examples: Electricity, Stored Mechanical, Thermal

Indirect Cause of Significant Events

The most prevalent indirect cause is reportedly from a capacity issue. Detailed event descriptions might suggest otherwise, however the data has been reported as provided.

Direct and indirect cause have not been correlated, largely because indirect cause has not always been reported, but this can easily be done in future.



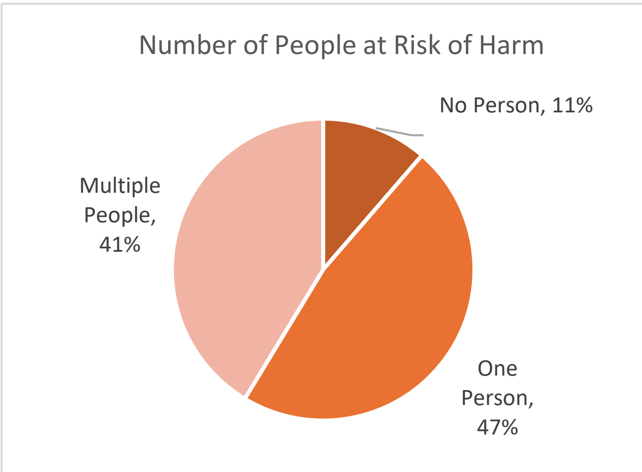
Work Capacity- The risk to any person of fatality caused directly or indirectly by the state of the person's health impacting on their work. This includes a reduced state of physical, mental or psychosocial wellbeing.

Examples: fatigue, occupational stress, anxiety/depression

Number of People at Risk of Harm

Number of People at Risk of Harm identifies the number of people who were in the vicinity or were at risk of harm when an event happened, whether they were harmed or not.

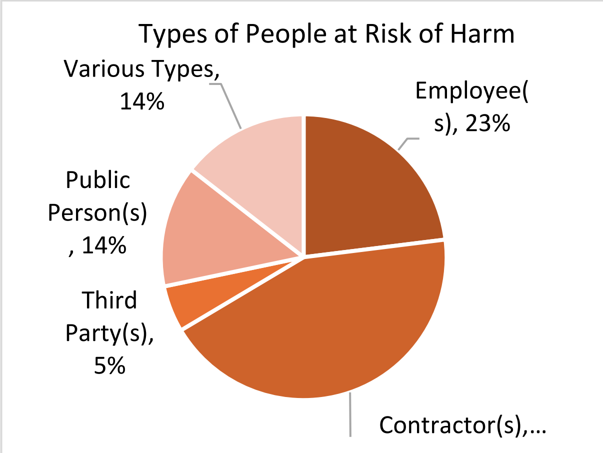
The results show that 47% of workers were either working alone or were alone at the working position, also of note is 41% of the events happened at sites with multiple people present.



Types of People at Risk of Harm

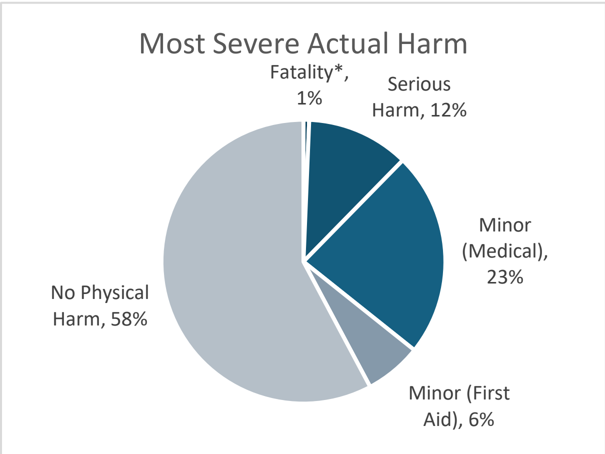
This year's survey also recorded the type of people who were at risk of harm during a significant event, the majority was contractors (43%) followed by employees (23%). The higher number of contractors is understandable given the contractors will often be the field workers.

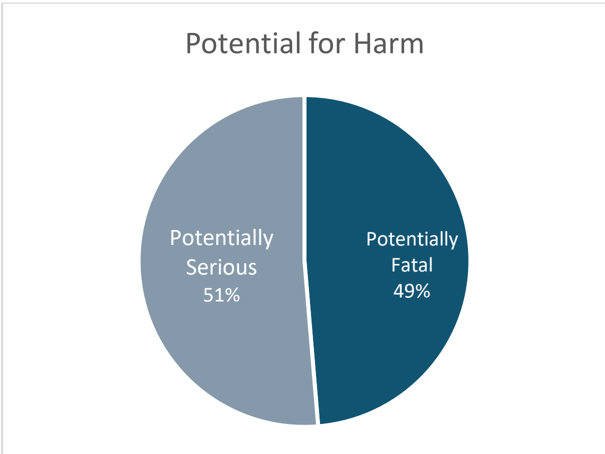
Various types is defined as a mix of employees, contractors, third parties, and/or public.



Severity of Harm

Analysis shows that most significant events often resulted in no physical harm but may have resulted in significant asset damage. It is noted that minor harm requiring first aid at the worksite (6%) could naturally be being under-reported, as this figure is relatively low.





An aggregation of worst-case potential shows an even spread between potential for fatality versus less serious harm. Correlation between potential harm and cause was not carried out this year.

** The fatality recorded was a member of the public who made contact with an overhead line.*

Physical Consequences

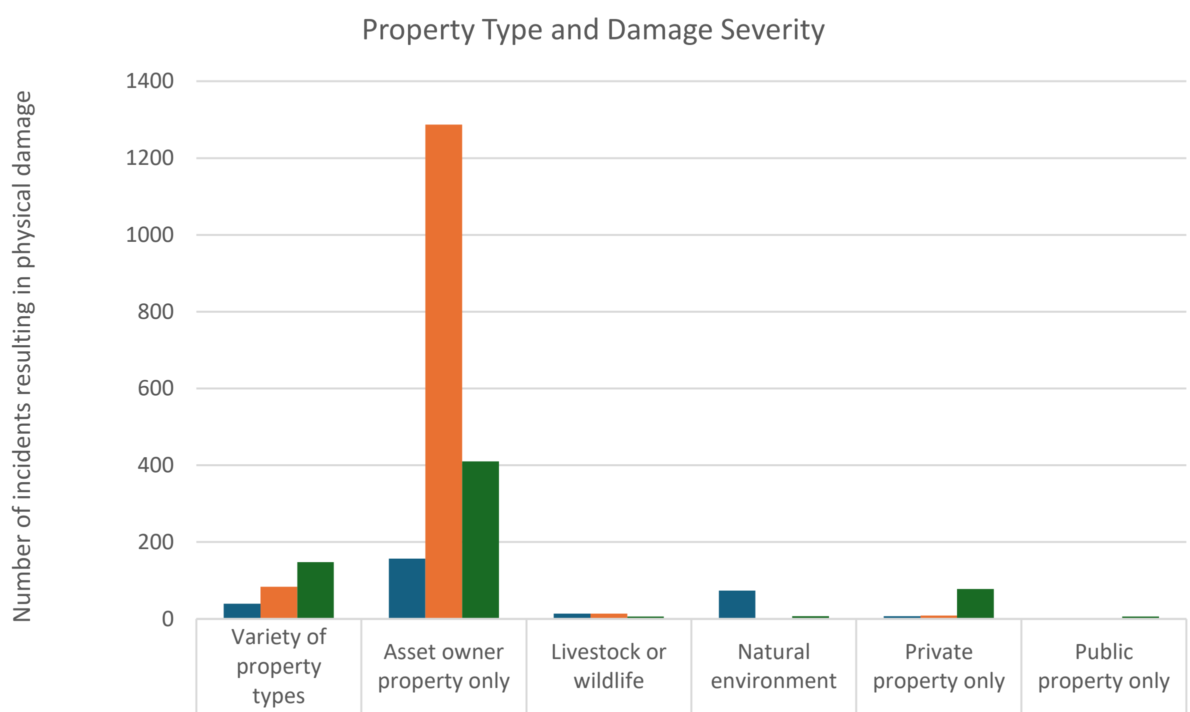
Property Damage from Safety Incidents

This year, a new part of the report has been introduced to capture the impact of safety incidents on man-made and natural property. Safety incidents can cause entirely new damage or worsen existing issues, and considering the cost and severity of property damage provides a more complete picture of the overall impact of incidents.

The Property Type and Damage Severity graph (below) illustrates the number of safety incidents that resulted in property damage across the industry, broken down by property type and severity.

For the purposes of this report:

- Total Loss is defined as one or more items being damaged beyond repair
- Major Damage refers to one or more items requiring specialist expertise to repair
- Minor Damage refers to one or more items sustaining superficial damage



	Variety of property types	Asset owner property only	Livestock or wildlife	Natural environment	Private property only	Public property only
Total Loss	40	157	14	74	7	2
Major Damage	84	1287	14	0	9	0
Minor Damage	148	410	6	7	78	6

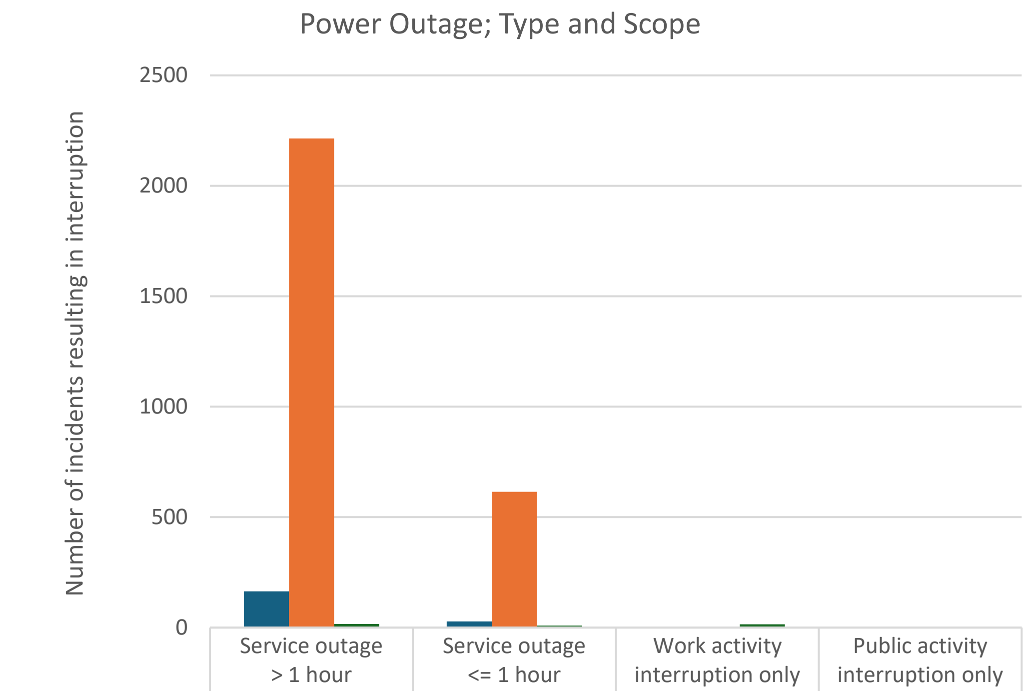
Key Observations:

- The majority of incidents resulted in minor damage, reflecting that most events caused only superficial impact to assets or equipment
- Major damage incidents were less frequent, but concentrated in categories such as plant and equipment, where repairs required specialist expertise
- Total losses, though relatively rare, were recorded across several property types and represent a significant financial and operational burden when they occurred
- Natural property impacts were limited in number, but when they did occur, they were more likely to involve major or total loss, underscoring their potential severity

Operational Consequences

Another addition to this year's report is the number of safety incidents which resulted in interruption to service or activity across all of industry, by interruption type and geographic scope. Safety incidents can also result in temporary power outages; the nature and extent of such interruptions can provide a more complete picture of the impact of a safety incident.

Where a safety incident results in a power outage, this can also create a safety risk to customers who are reliant on electricity for health or safety reasons. In this sense, an unplanned outage could be classed as a significant event where no-one was present at the outage site.



	Service outage > 1 hour	Service outage <= 1 hour	Work activity interruption only	Public activity interruption only
Widespread	164	28	1	1
Localised	2215	614	0	1
Incident Area Only	16	9	15	1

Key Observations

- The vast majority of outages were localised (i.e. affecting one feeder and/or contained to work areas only)
- Many indicated difficulty collecting this data, citing that operational outages and interruptions are generally not linked to health and safety incidents

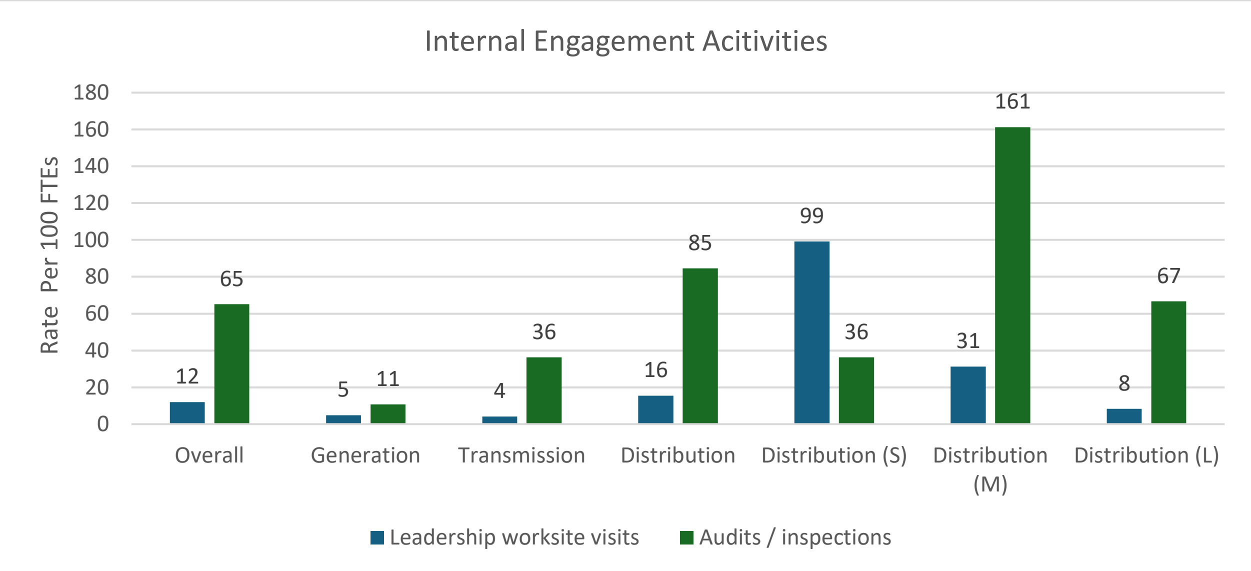
Leading Indicators

Audits and Leadership Visits

In 2019, the EEA began requesting data on four agreed pan industry leading indicators – audits, corrective actions, drug and alcohol testing, and Health and Safety site visits by Executives and General Managers.

The overall rate of leadership visits (12) is down from the 2023 rate (around 16), although certain companies are showing high numbers in this area. The rate of internal audits / inspections is especially high (65), suggesting that inspections are being embedded into business-as-usual.

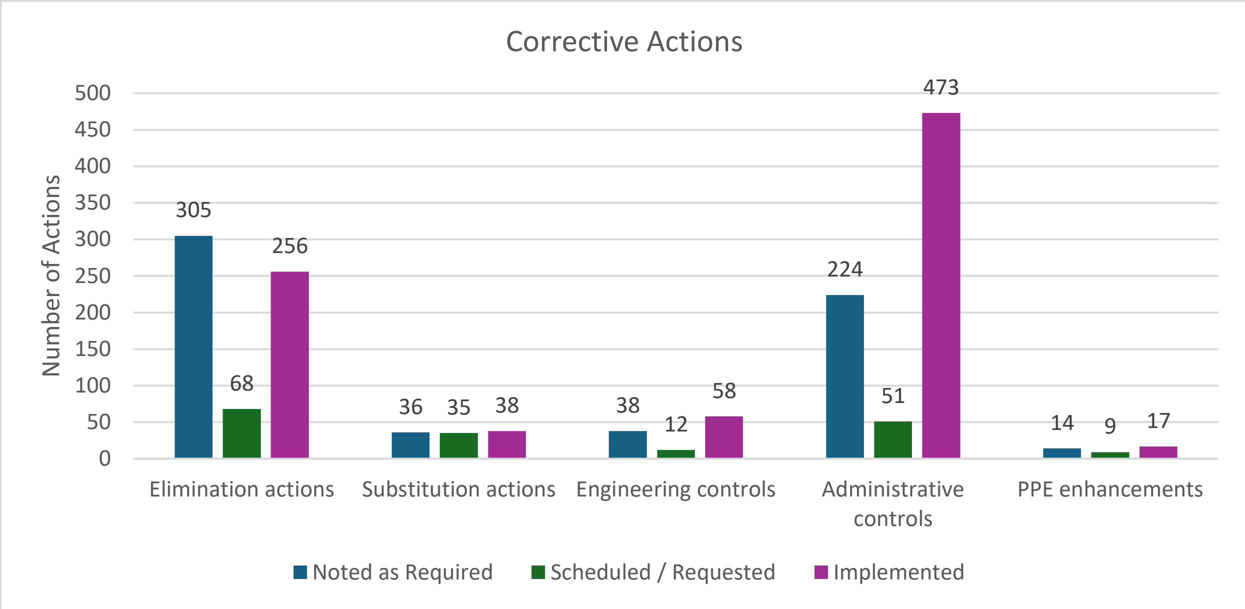
- Some respondents mentioned an increase in safety culture as a result of regular engagement conversations
- Staff resourcing is an issue, with site foreman and supervisors trying to do their best
- Many mentioned a vested improvement in contractor engagement
- Enhanced collaboration across the industry was highlighted as a positive development



**There is a large variance between companies in the data around internal audits / inspections and senior leadership worksite visits (e.g. 0-1600). This suggest it would be useful to review how these are defined and measured.*

Corrective Actions

This year, the hierarchy of engineering controls was used as an action framework, and the number of actions (required/scheduled/implemented) was collected, instead of a single percentage for actions completed within timeframe. A third of respondents indicated they are unable to provide the data classified in this way. Less than half provided detail for various reasons. Some respondents indicated they were working on making reporting improvements in this area.



The sentencing of the former Ports of Auckland CEO demonstrates the critical importance of not just setting corrective actions, but actively verifying that they are implemented, effective, and aligned with higher-order controls. The court found that while some safety processes existed, there was no assurance they were embedded or functioning in practice—a gap in oversight that contributed to a worker's death.

In the context of the ESI Health and Safety Survey:

- The move from a simple "% of actions completed within timeframe" to tracking required, scheduled, and implemented actions reflects the same principle: it is not enough to record that actions exist; organisations must know where they sit in the control hierarchy and confirm their effectiveness
- The fact that a third of respondents could not provide data, and less than half supplied detail, highlights a systemic challenge in reporting corrective actions. This parallels the court's finding that poor verification of safety measures leaves organisations exposed to both serious risk and legal accountability
- Respondents who are working to improve reporting systems are acting in line with the lessons of the Ports of Auckland case: accountability requires not only closing actions, but also ensuring they are correctly classified, prioritised at the right level of control (engineering > administrative > behavioural), and demonstrably reducing risk

Training and Refreshers

This year, statistics on training and refresher completion were collected to provide clearer insight into how well organisations are maintaining health and safety capability. Collecting this data is important because it highlights levels of compliance, identifies potential gaps, and ensures that workers remain equipped with the knowledge needed to manage critical risks effectively, which is especially important in this changing environment with a growing workforce and emerging technology.

Of the 30 participants, seven either did not provide information on the number of workers with up-to-date training or reported difficulty in calculating this figure. Eight participants reported that 100% of their workers' training is current, while the remaining responses varied across a range. Notably, the reported Full-Time Equivalent (FTE) figures exclude trainees and apprentices where this detail was provided.

It is also possible that some responses reflect only field-based workers, as office staff may not be subject to ongoing health and safety training requirements.

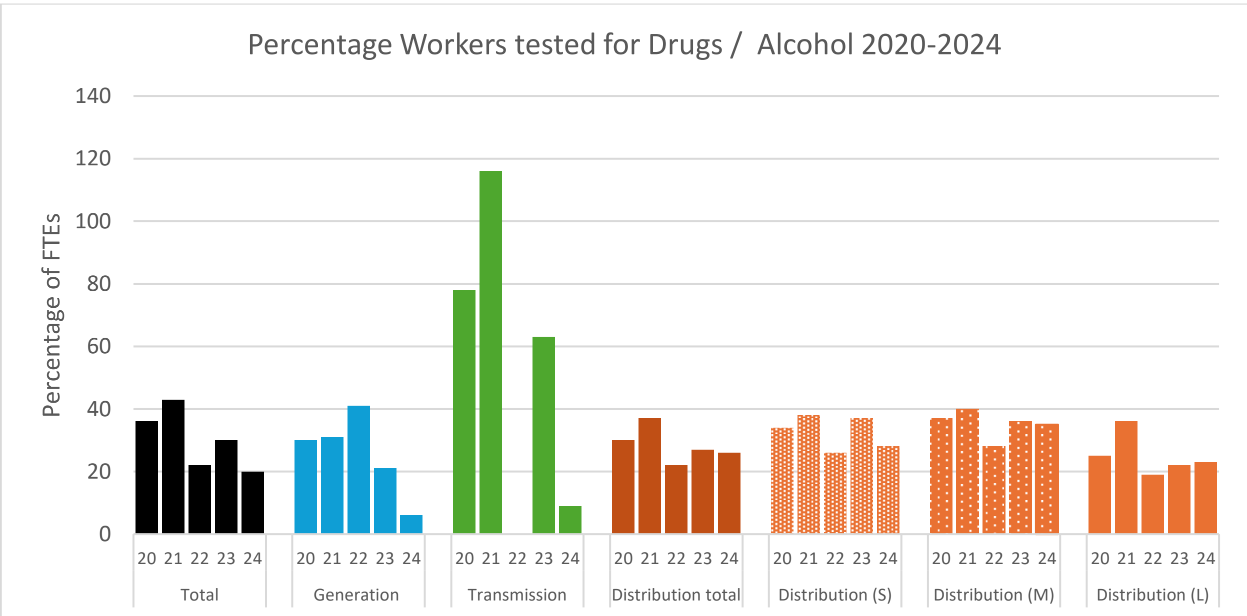
Trainees and Apprentices

The number of current trainees or apprentice is 199 across 20 of the respondents, two respondents had none, and eight companies did not enter a response. The highest number of trainees or apprentices in a company was 33.

Drug and Alcohol Testing

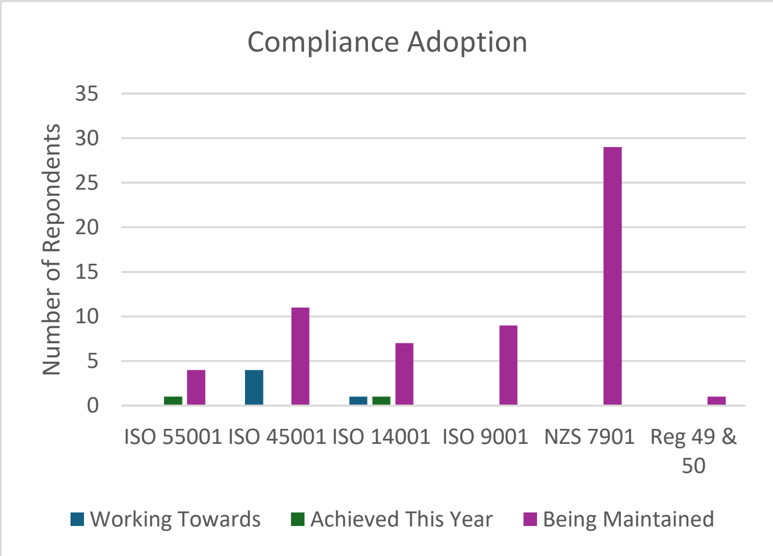
Some respondents expressed positive attitudes amongst workers and a general culture of acceptance, while others expressed negative responses to testing activities. A few respondents noted policy reviews are being undertaken in this area.

The overall percentage of FTEs tested for drugs and alcohol is down to around 20% this year, from around 30% in 2023. Percentages are down for Generation and Transmission, and they remain about the same for Distribution. The percentage of employees and contractors tested is relatively even. Approximately 2% of tests returned a positive result.



Compliance Activities

In this report leading measures include respondents' engagement with various health and safety related ISO accreditations and New Zealand standard 7901. Remarks made by respondents around their compliance activities suggests that auditor feedback is welcome, and that accreditations and standards are valued.

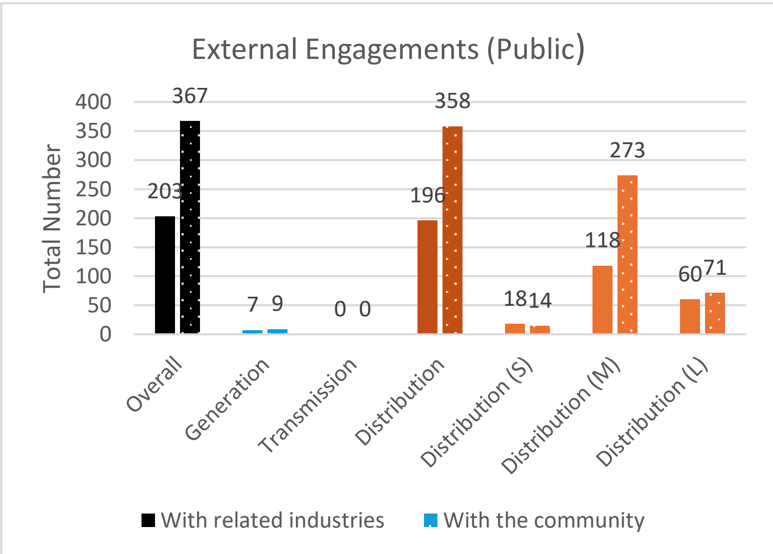


The Compliance Adoption graph shows the accreditations respondents are either being regularly maintained, achieved this year, or are working towards. Most respondents are maintaining at least NZ 7901, or similar and congratulations are due to those that are on the journey towards, or who have recently achieved, an ISO standard this year.

**All but one* *respondent reported that NZS 7901 is being maintained for Public Safety Management System requirements. That respondent has been further assessed and found to be in compliance with Regulation 51 (1)(a)(b) and (c) of the Electricity (Safety) Regulations in accordance with Regulations 49 and 50.*

Public Safety

Proactive engagement in health and safety requires a multi-pronged approach that includes both face to face engagement with third parties and wider communities, as well as communications initiatives through visual and/or audio media.



The value of engaging with contractors (in particular) and the public in face-to-face settings is noted in numerous comments made by respondents.

The overall number of external engagements is considerably higher (570) than in 2023 (around 60), as this has been redefined more broadly this year, which explains the higher number of engagements with a wider variety of activities are being counted.

Media Campaigns

Public safety awareness through in-person engagement is traditionally supplemented with media-based initiatives.

The use of digital media (including social media) is increasing, and this can be audio or visual-based to cater to diverse audiences. This year media has been broadly split into audio or visual.

__Visual media__ includes advertising by print media or web page, or campaign by email, physical post or mail drop, while __Audio media__ includes involvement in TV or radio advertising, or interview on TV or radio, or online podcast

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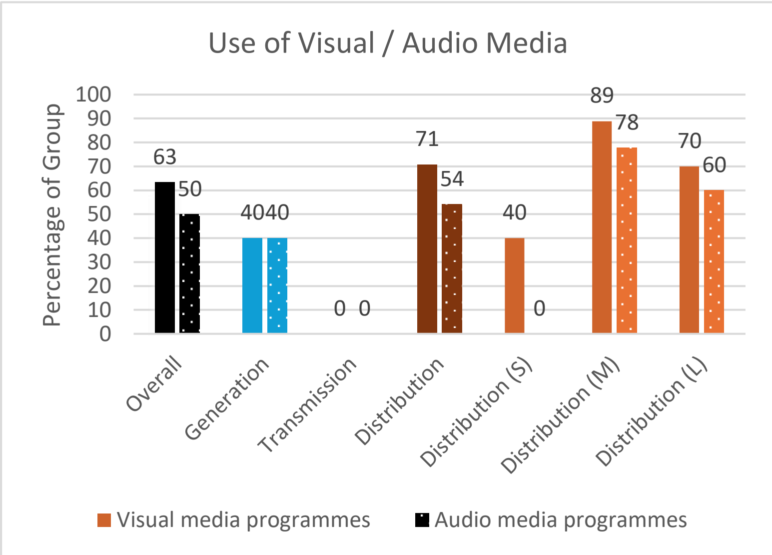
The use of Visual / Audio Media graph below shows the percentage of each peer group that have used visual or audio media to any extent during the year.

Medium-sized distribution companies have reported the most use of media. Several respondents have not answered this question, so the data must be read with this in mind.



Comparisons with previous years are not made due to the shift away from traditional methods towards digital media.

Some examples of external engagement included in the survey were:

- Agriculture and Pastoral Shows and Field Days
- School visits
- Local community meetings on topics such as upcoming projects
- Targeted campaigns
- Contractor health and safety forums
- Third Party Engagement, such as FENZ and Scaffolding
- Social media is being used heavily

Copper Theft

Copper theft continues to be a growing issue within the electricity supply industry. Initially, thefts were largely confined to earth wires on poles and equipment, while the immediate risk to the perpetrator was low, the removal of earthing introduced serious safety hazards for workers and households by eliminating the protective reference to earth. More recently, however, thieves have escalated to removing live overhead lines and breaking into secure sites to steal construction equipment. The removal of live conductors poses an extreme risk to offenders themselves and creates public safety hazards, as remaining lines are often left hanging in dangerous configurations.

The issue has been fuelled by the high price of copper and the increasing availability of portable, battery-powered tools, which make theft faster and more accessible. While many companies previously avoided public discussion to limit the risk of copycat activity, a growing number of network companies are now engaging with the media to raise awareness and promote safety, recognising the broader risks to communities and industry alike.

To address this issue, the industry is increasingly focused on strengthening site security, exploring alternative materials, and working collaboratively with law enforcement and the public to reduce theft and its associated risks.

Copper theft in The New Zealand Herald

About this Report

Definitions

Asset Failure	The malfunction, degradation, or collapse of physical infrastructure or equipment used in the electricity supply industry, which indirectly contributes to safety incidents, hazards, or uncontrolled events.
Capacity	The risk to any person of fatality caused directly or indirectly by the state of the person's health impacting on their work. This includes a reduced state of physical, mental or psychosocial wellbeing."
Contractor	People employed by a contracting organisation to the asset owner.
Distribution (S)	A distribution company with less than 100 employees.
Distribution (M)	A distribution company with between 101 and 250 employees.
Distribution (L)	A distribution company with more than 250 employees.
Direct Cause	The immediate or proximate factor that triggers a safety incident or significant event—such as the release of energy, impact, or contact that results in actual or potential harm to people, property, or operations.
Employee	People employed by the asset owner.
Equipment Failure	The breakdown or malfunction of tools, machinery, or mobile apparatus used in operations that indirectly contributes to safety incidents within the electricity supply industry.
Full-Time Equivalent (FTE):	Total number of workers, including part-time (pro-rated) employees, and contractors, who carried out work for the electricity supply asset owner over the reporting year.
Indirect Cause	An underlying factor or condition that contributes to the occurrence of a safety incident but is not the immediate trigger. These causes are often systemic or contextual, creating the environment or conditions in which a direct cause can occur.
Lost Time Injury (LTI)	A work-related injury or illness that results in at least one whole calendar day off work.
Public	A lay person in close proximity to work equipment, or in-service assets. For example, a pedestrian, or public road user.

Restricted Work Injury (RWI)	A work-related injury or illness that results in work restrictions or a job transfer for at least one whole calendar day.
Medical Treatment Injury (MTI)	A work-related injury or illness that is treated but does not lead to lost time or job restrictions. This excludes injuries requiring first-aid only, diagnostic procedure only, or a visit to a medical practitioner for counselling or observation only.
Security Breach	An unauthorised access, interference, or failure of controls that compromises the integrity, safety, or operational reliability of electricity supply industry assets, systems, or personnel.
Significant event	Any incident or near miss that resulted, or could have resulted, in serious harm to a person, significant damage to property, or a major operational impact.
Third Party	People working in close proximity to work equipment, or in-service assets, that are not working under the instruction of the asset owner. For example, a civil works contractor, streetlight maintainer, high-load transporter.
Total Recordable Injuries (TRI)	The total number of Fatalities, Lost Time Injuries, Restricted Work Injuries and Medical Treatment Injuries.

Calculations

Lost Time Injury Frequency Rate (LTIFR)	Expressed as the number of incidents per 200,000 hours worked, and calculated by: (Number of LTIs * 200,000) / (Number of FTEs * 2,000)
Restricted Work Injury Frequency Rate (RWIFR)	Expressed as the number of RWIs per 200,000 hours worked, and calculated by: (Number of RWIs * 200,000) / (Number of FTEs * 2,000)
Medical Treatment Injury Frequency Rate (MTIFR)	Expressed as the number of MTIs per 200,000 hours worked, and calculated by: (Number of MTIs * 200,000) / (Number of FTEs * 2,000)
Total Recordable Injury Frequency Rate (TRIFR)	Expressed as the number of TRIs per 200,000 hours worked, and calculated by: (Number of TRIs * 200,000) / (Number of FTEs * 2,000)
Lost Time Injury Severity Rate (LTISR)	Expressed as time lost per 200,000 hours worked, and calculated by: (Number of calendar days away from work * 200,000) / (Number of FTEs * 2,000)
Restricted Work Injury Severity Rate (RWISR)	Expressed as restricted work time per 200,000 hours worked, and calculated by: (Number of calendar days on restricted work * 200,000) / (Number of FTEs * 2,000)
Average Time Lost Rate (ATLR)	A simple severity rate indicating time lost per LTI, and calculated by: Number of calendar days lost to LTIs / Number of LTIs

Disclaimer

EEA thanks members of the New Zealand electricity supply industry for the information in support of this Electricity Supply Industry (ESI) Safety Survey Report.

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Survey Quality, Learnings, and Future Improvements

Overview

Throughout the 2023–24 reporting cycle, several challenges and uncertainties were observed in the way data was reported by respondents. These included difficulties interpreting certain definitions, inconsistencies in the application of causal frameworks, and a general lack of clarity in some reporting categories.

To continuously improve the value and usability of the survey, this section collates feedback and learnings from this year's responses and proposes actions for enhancing the process going forward.

ISSUE	DESCRIPTION	IMPACT
Inconsistent Definitions	Terms such as *operational FTE*, *major vs. minor damage*, and *corrective actions* were interpreted differently by respondents	Lower comparability of results; risk of inaccurate benchmarking
Difficulty with Causal Attribution	Respondents struggled to distinguish between *direct* and *indirect causes*, and many left indirect causes blank	Weakens causal analysis and trend identification
Data Completeness Gaps	Examples include under-reported MTIs, missing harm analysis for significant events, and uncertainty around restricted workdays	Affects confidence in the accuracy and usefulness of safety metrics
Technical Complexity	Classifying corrective actions using engineering control hierarchies was difficult for many organisations	Resulted in partial or omitted data from a third of respondents