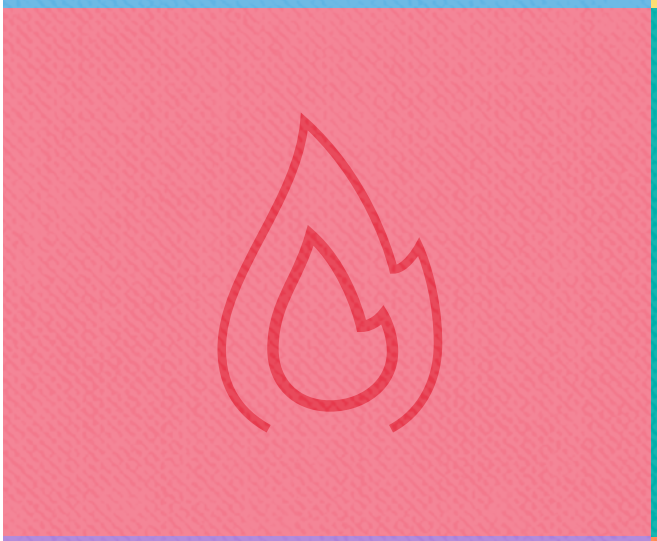
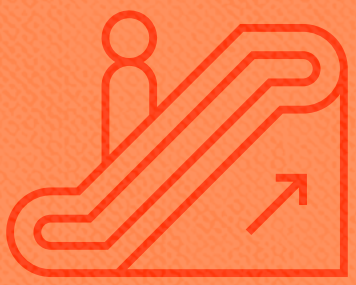
2025 TSSA Public Safety Report





TECHNICAL STANDARDS & SAFETY AUTHORITY
TSSA

Acknowledgements

The Technical Standards and Safety Authority (TSSA) presents this year's edition of the Public Safety Report for the fiscal year 2025 (May 1, 2024 - April 30, 2025); hereinafter referred to as FY25.

TSSA delivers public safety services on behalf of the Government of Ontario in the following key sectors:

- Boilers and Pressure Vessels and Operating Engineers
- Elevating Devices (Elevators, Escalators and Ski Lifts) and Amusement Devices
- Fuels

TSSA enforces the Technical Standards and Safety Act, 2000 (the Act) and its associated regulations.

Refer to www.tssa.org for further information on TSSA.

Refer to www.ontario.ca/laws/statute/00t16 for the Act.

TSSA would like to express gratitude to its inspectors and engineers for collecting and documenting valuable pieces of information and data—through their inspections, investigations, and engineering services—that have been instrumental in developing this report, as well as the Communications and Stakeholder Relations team for reviewing and supporting the drafting of the report. TSSA also extends our thanks to the Customer Service team for their critical role in maintaining data cleanliness and would like to especially acknowledge the Strategic Analytics Team for developing this report.

TSSA would also like to acknowledge Safety and Risk Officer Deepak Jaswal, LLB, CTPRP, for his advice and independent review of the report.

Finally, TSSA would like to thank its partners in industry, government, advisory councils, and the public, who help keep Ontarians safe.

Contents

Message from TSSA Directors

We are pleased to present the 2025 edition of the Technical Standards and Safety Authority (TSSA) Public Safety Report (PSR) that provides a review of public safety trends in Ontario for each of the industries regulated by TSSA. Safety data collected by TSSA is used to estimate the level of risk to which Ontarians are exposed through TSSA-regulated technologies, devices, equipment, and certified tradespeople. The PSR documents the state of safety in the places we live, work and play by outlining data, evidence, and patterns that can be used to further enhance safety management practices and risk-reduction strategies.

During the fiscal year 2025 (FY25), TSSA continued to observe improvements in compliance and safety management practices resulting in overall fewer injuries reported. The rate of incidents per million people remains stable compared to 5 years ago, and the number of permanent injuries has decreased over the past decade. In FY25, there were 39% fewer permanent injuries reported compared to 2016, after adjusting for population size. Supporting these promising outcomes, TSSA also reports a 69% compliance rate for periodic inspections.

This impact is a direct result of dedicated efforts across industry partners, owners, operators and, certificate holders to actively improve compliance and reduce risk and the potential for harm. TSSA's efforts have focused on building partnerships, enhancing education and awareness, and bridging gaps to ensure that regulated parties can effectively manage and reduce risk.

From May 2024 to April 2025, the Compliance Support team provided support to 131 owners and operators through one-on-one compliance support efforts, covering 1,375 Authorized Inventory across Elevating Devices, Fuels, and Boilers and Pressure Vessels. TSSA experts delivered 17 educational presentations across Ontario, reaching 1,464 participants from various sectors.

To further enhance public safety, TSSA ensured expired authorizations were either renewed, or operations ceased, achieving resolution rates of more than 98% across all programs.

From engineering designs, registration applications, inspection activities and compliance support, TSSA collects key data for the purposes of outcome-based and risk-informed decisions. This data is carefully analyzed and reviewed by TSSA, and insights are shared with different stakeholders to inform, educate and influence decisions.

Data and analytics products developed by the Strategic Analytics team help TSSA identify priorities and opportunities for harm-reduction and maximize outcomes, such as a machine learning model for periodic inspection frequencies, risk scores and performance metrics.

The PSR offers a snapshot of public safety across the province and will continue to evolve as we improve how we measure safety outcomes. We encourage you to read this report and thank you for doing your part for a safer Ontario.

Viola Dessanti
Director, Strategic Analytics

AJ Kadirgamar
Director, Elevating and Amusement Devices and Ski Lifts Safety Program

Owen Kennedy
Director, Fuels Safety Program

Kim Semper
Director, Boilers and Pressure Vessels and Operating Engineers Safety Program

Phil Simeon
Director, Regulatory Policy

About Us

TSSA is Ontario's public safety regulator mandated by the Government of Ontario to enforce technical safety regulations and enhance public safety. Throughout Ontario, TSSA regulates the safety of amusement devices, boilers and pressure vessels, elevating devices, fuels, operating engineers, and ski lifts. TSSA's range of safety services includes public education and consumer information, examination, certification, licensing and registration, engineering design review, data analytics, risk evaluation, standards development, inspections, investigations, safety management consultation, compliance support, and enforcement and prosecution activities. TSSA also provides limited non-regulatory services through contracts to organizations in Ontario, mainly in the nuclear industry.

State of Safety in Ontario

All Programs Combined

Total Number of Incidents	6,619
Total Number of Non-Permanent Injuries	1,717
Total Number of Permanent Injuries	49
Total Number of Fatalities	3

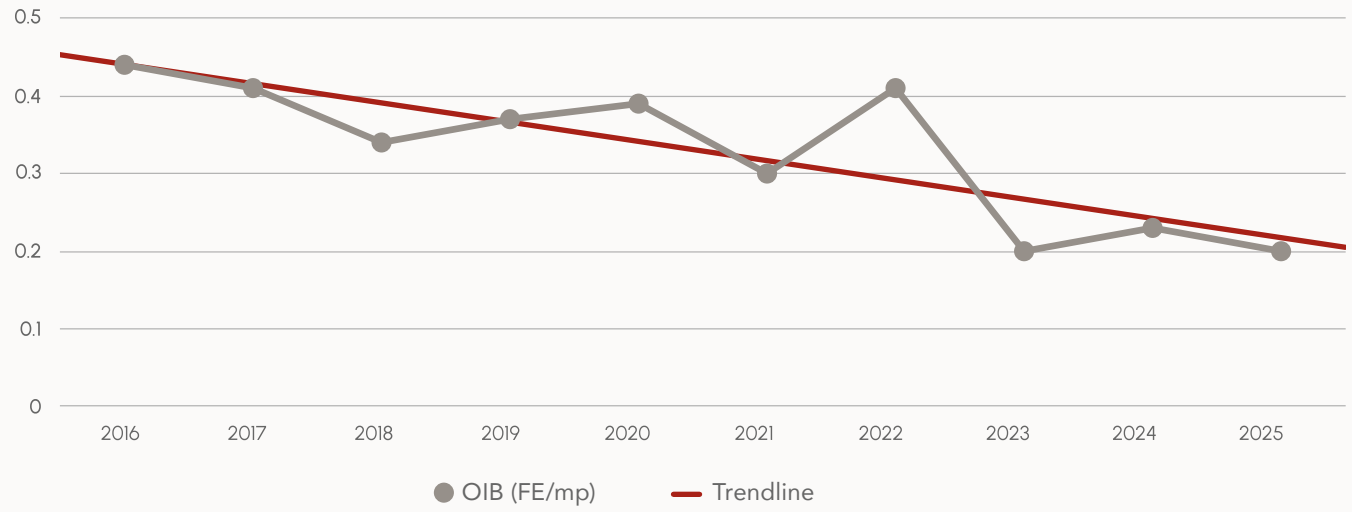
Incidents, Injuries and Fatalities

Incidents

Reporting Period	*Incidents*	*Non-Permanent Injuries*	*Permanent Injuries*	*Fatalities*
10-year average	**5,666**	**1,403**	**48**	**3**
FY25	**6,619**	**1,717**	**49**	**3**

There has been an increase in the total number of incidents and non-permanent injuries in 2025 compared to the 10-year average. Over the past few years, TSSA has made enhancements in data collection and reporting processes and worked with industry to establish reporting standards. Considering the reporting enhancements and the 15% population growth of Ontario from 2016 to 2025, the rate of incidents per million people is stable with a slight increase from 409 incidents per million people in 2016 to 414 incidents per million people in 2025. Permanent injuries, as a measure of severity of an incident, has declined over the past 10 years, with 39% fewer permanent injuries reported in 2025 compared to 2016 (normalized by population).

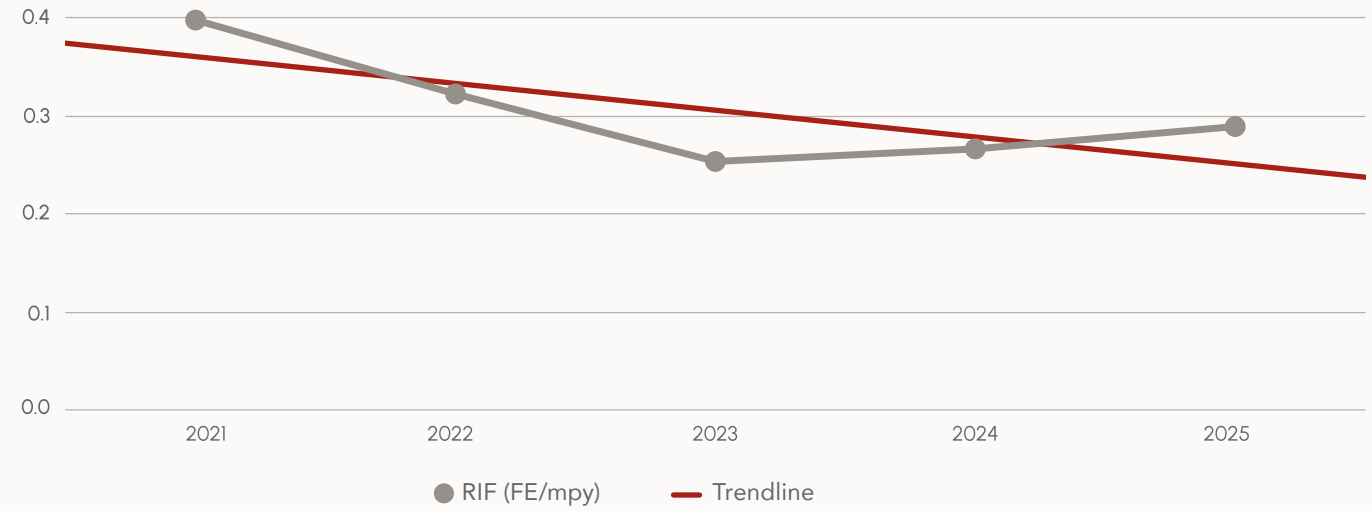
Figure A1: 10-Year Observed Injury Burden Trend for All Programs



Observed Injury Burden* (OIB) is driven by reported fatalities and severity of injuries experienced during incidents. The drop in fatalities in FY25 (3 compared to 4 last year) and the downward trend in permanent injuries are driving the drop in the OIB metric, leading to a downward trend for the past 10 years despite annual fluctuations.

**Note – This year, we have transitioned from using a static population[1] figure to utilizing year-specific population data. This would reflect in all OIB data.*

Figure A2: Risk of Injury or Fatality for All Programs (2021-2025)



TSSA's Risk of Injury or Fatality (RIF) estimates the potential for injury or fatality by performing a Monte Carlo simulation on incident data. In FY25, it calculated that the RIF in all program areas was at 0.289 FE/mpy (Fatality Equivalent per million people per year). The slight uptick in the RIF from 2023 to 2025 is driven by the 3 fatalities in this fiscal year.

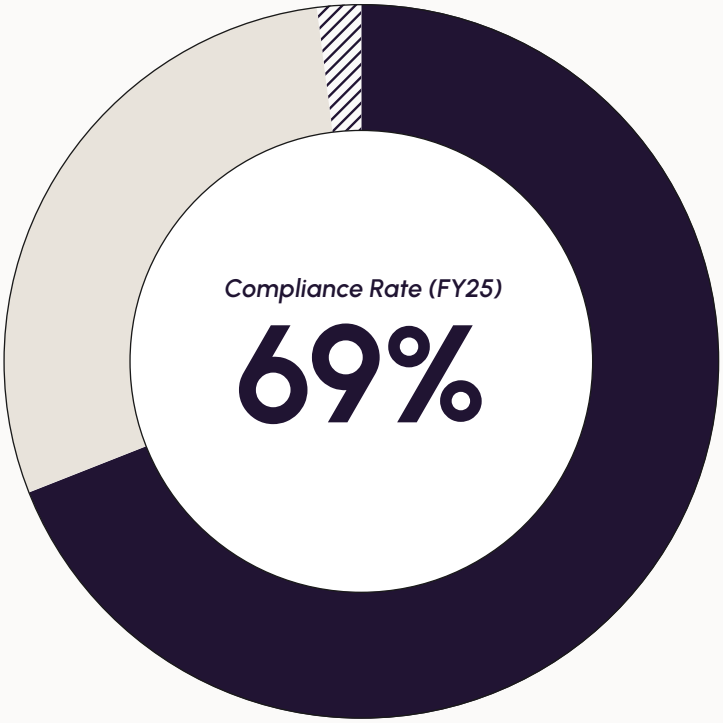
1 Population estimates, by age and gender (statcan.gc.ca) accessed on 2025-05-01

Inspection Results

TSSA conducts a variety of inspection types including periodic and non-periodic inspections on regulated devices/ facilities. The goal of these inspections is to check compliance to the respective regulatory and code requirements. This is a critical step in the safety value chain that provides TSSA with critical data used for analysis and reporting. For example, data collected at inspections is used to identify areas where there are higher probabilities of risk and to inform TSSA's regulatory responses to these scenarios.

Across all programs, 69% of all periodic inspections conducted by TSSA resulted in a compliant inspection and 29% resulted in a failed inspection. A compliant inspection means no high-risk issues were found, while a failed inspection means a high-risk issue requiring urgent attention was identified. When periodic inspections fail, the owner/operator is given 14 days to address the issue before a TSSA inspector follows-up with another inspection to ensure compliance. TSSA monitors patterns of high-risk non-compliances to identify opportunities to leverage education, compliance support and partnership to improve compliance.

Figure A3: Periodic Inspection Results



In FY25, a total of 17,800 periodic inspections were completed. Of these, 12,296 were compliant, 5,156 failed, and 348 fell into the "other" category. "Other" category means the inspection could not be categorized into either compliant or fail.

TSSA uses data and evidence to risk assess code and regulatory requirements and identify priorities for compliance during inspections. These are distributed to regulated parties, where applicable, in the form of **Compliance Standards** to ensure they are informed about the critical requirements for compliance during a periodic inspection.

Compliance Support

The Compliance Support Program is a no-cost, professional service delivered by TSSA and is designed to assist regulated entities to comply with codes, regulations and standards.

The program is geared towards entities where data from past periodic inspections demonstrates a need for compliance assistance.

Independent of and separate from TSSA's inspection activity, this compliance support service, through a compliance support advisor, gives entities the opportunity to engage directly with TSSA to address specific non-compliance issues. Through one-on-one guidance, a compliance support advisor provides tailored advice, education, and support in parallel to TSSA's periodic inspection process. This past fiscal year, TSSA has provided compliance support to over 130 regulated parties.

Additionally, in FY25, TSSA conducted 17 presentations across Ontario, delivering information and education on compliance standards and TSSA's data-driven approach to enhancing public safety to over 1,400 audience members from all sectors.

Resolved Lapsed Authorization

As part of TSSA's mandate to enhance public safety, TSSA has an ongoing process to address expired authorizations that ensures authorization holders who have not renewed, or reinstated their authorizations, do not continue to operate. The process involves follow-up communication with owners and authorization holders and, if required, inspections to either request the renewal of the authorization or terminate the operations. Expired authorizations are considered "Resolved" if they are either successfully renewed or the operations are confirmed halted. The following summarizes the outcomes across various program areas:

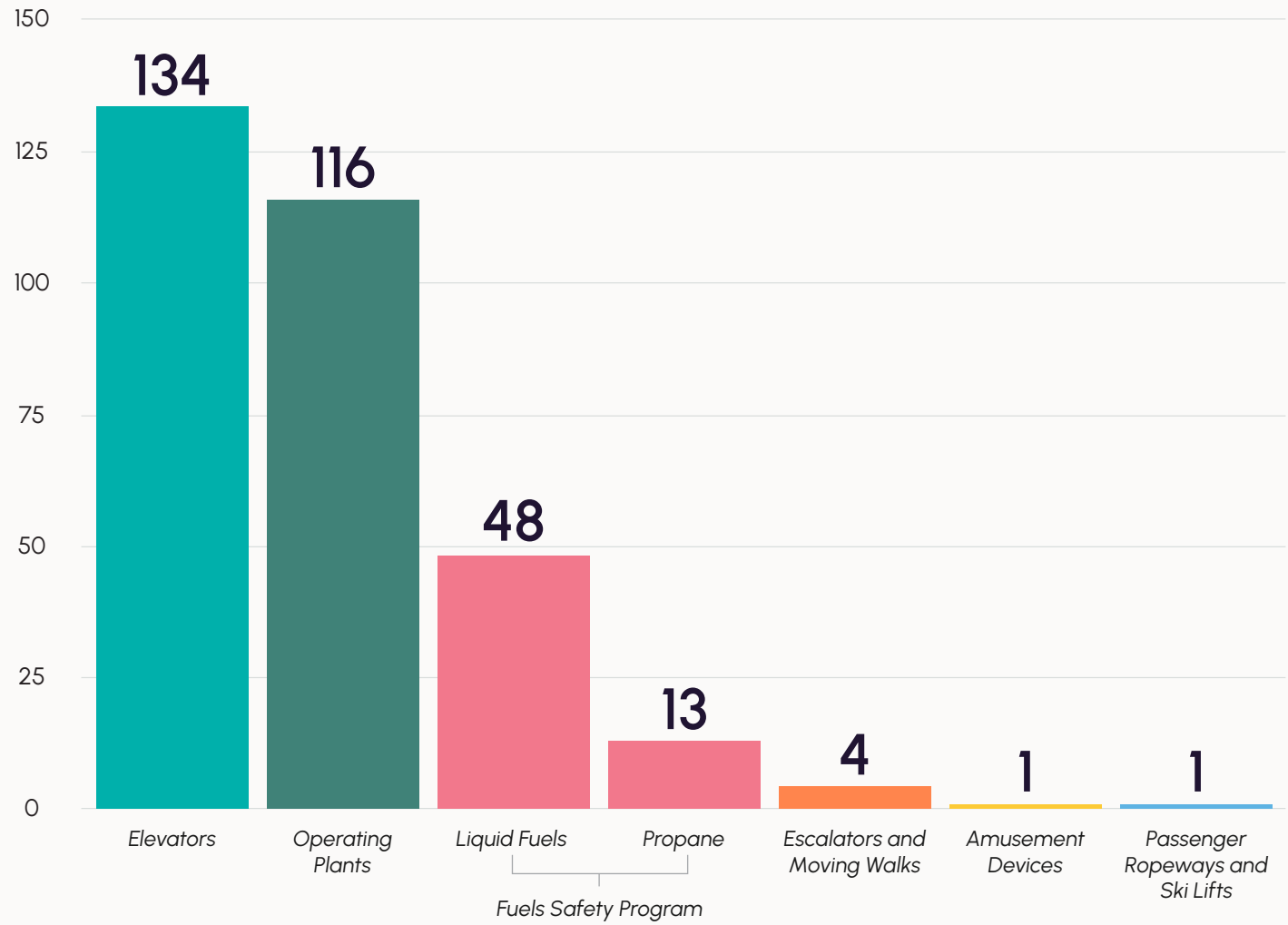
- Boilers and Pressure Vessels[2]: 98% resolution rate, with a total of 10,233 resolved authorizations.
- Elevators, Escalators, Amusement Devices, and Ski Lifts: 99% resolution rate, with a total of 47,256 resolved authorizations.
- Fuels Program: 99% resolution rate, with a total of 12,965 resolved authorizations.

2 The Boilers and Pressure Vessels Lapsed Authorization program only includes devices for which TSSA has received a Record of Inspection (ROI). Devices with no ROI are currently not in scope for this program.

Figure A4: High-risk devices and sites for elevators, escalators, amusement devices, ski lifts, liquid fuels, propane, and OE plants in FY25

Number of High-risk Devices and Sites **317**

Percentage of High-risk Inventory **1.90%**



Based on a methodology developed in 2017, TSSA analyzes data from inspection activities and reported incidents to assess the relative risk of Authorized Inventory across the above TSSA-regulated industries. The risk score for each device is then compared against a risk threshold set by the program statutory director. In FY25, less than 2% of inventory had a risk level above TSSA tolerability level. The high-risk inventory percentage for FY25 is slightly above that of last year. This increase is primarily due to an increase in the percentage of high-risk Operating Engineers plants.

TSSA is updating the 2017 methodology for identifying high risk inventory by developing predictive models that factors in more data elements available to TSSA. The aim is to minimize risk by visiting sites with a higher probability of risky behaviour more often. As the new modeling methodology matures, we may retire the 2017 method of identifying high risk inventory and focus on more outcome-based metrics.

Amusement Devices

TSSA's Amusement Devices Safety Program regulates the devices designed to entertain thrill seekers, including roller coasters, Ferris wheels, merry-go-rounds, water slides, go-karts, bumper cars, inflatables, bungee devices and Zip Lines.

Before a new amusement device is registered, TSSA reviews engineering designs to ensure compliance with Ontario's safety requirements. TSSA licenses amusement rides and operators and issues certificates to qualified mechanics.

TSSA also issues permits for rides each year the rides are in operation. TSSA inspects new devices prior to their start up and again at the start of every new season. When necessary, TSSA also conducts investigations.

At a Glance

Compliance Rate FY25

83%

Number of Permitted Rides

923

Approved Engineering Designs

130

Operators

264

Certified Mechanics

375

Incidents, Injuries and Fatalities

In FY25, there was an increase in both total incidents and injuries compared to the 10-year average. Reported incidents rose to 1,267, marking a 46.4% increase, while permanent injuries rose to 32. However, it is important to consider the sharp decline in incident reporting during the COVID-19 period which lowers the overall 10-year average.

In FY25, the number of permanent injuries were 32, representing a 23.8% reduction from 42 in FY16.

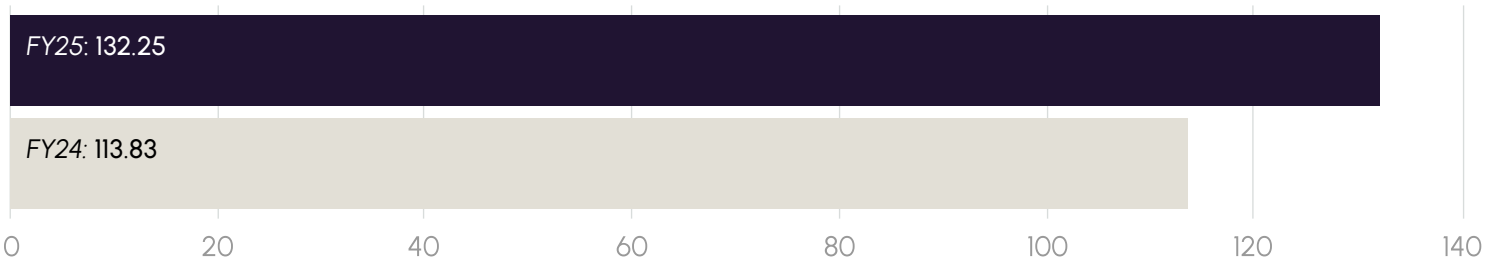
This suggests that, although the short-term figures appear elevated, overall safety performance has improved over time.

The rise in reported numbers may also reflect better data capture and reporting practices. TSSA has partnered with Amusement Device (AD) owners and operators to strengthen incident reporting and has made internal improvements to enhance data quality.

Incidents

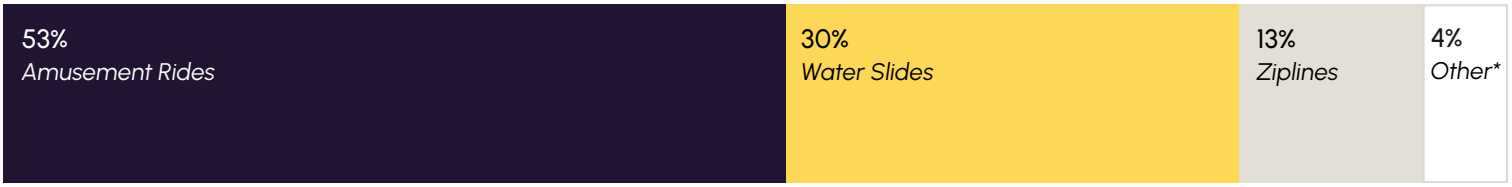
Reporting Period	*Incidents*	*Non-Permanent Injuries*	*Permanent Injuries*	*Fatalities*
10-year average	**865**	**802**	**23**	**0.2**
FY25	**1,267**	**1,194**	**32**	**0**

Incidents per 100 Permitted Amusement Devices[3]



Distribution of Incidents by Amusement Device Types (2016-2025)

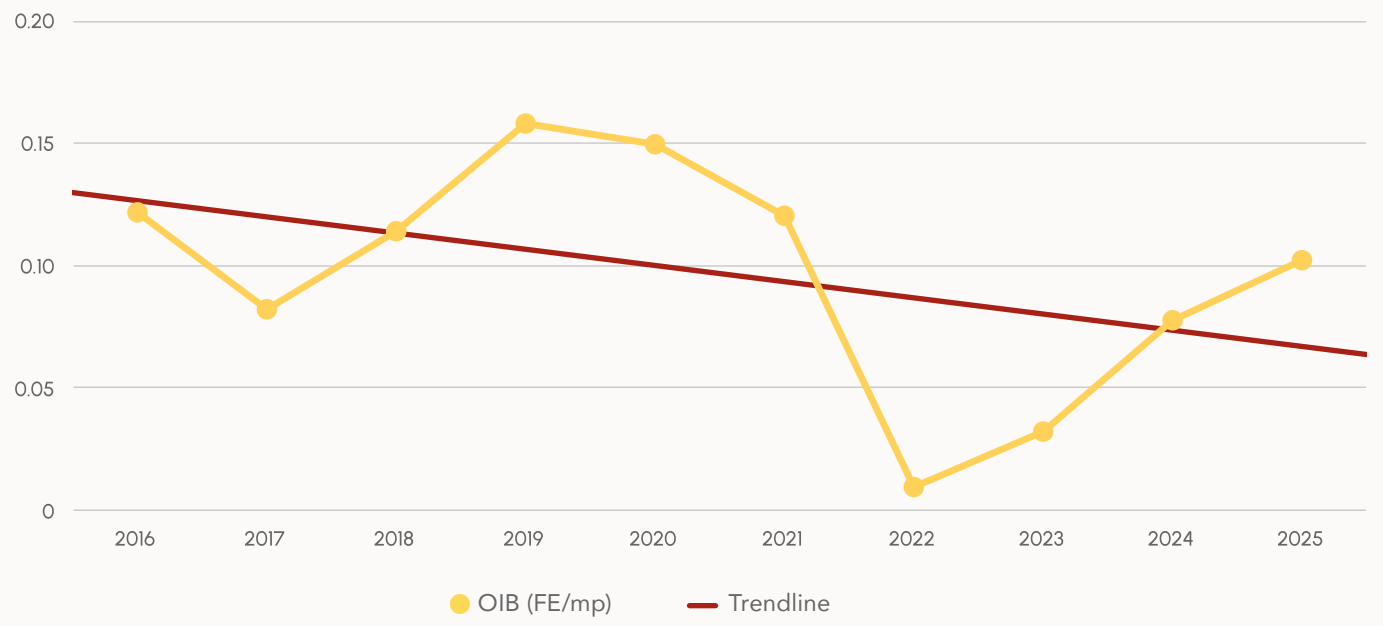
Half of the reported incidents over the past 10 years have occurred on amusement rides. and one third on water slides. These device types represent 28% and 14% respectively of overall permitted rides in the year.



**Other Amusement devices and rides (go-karts, inflatables etc)*

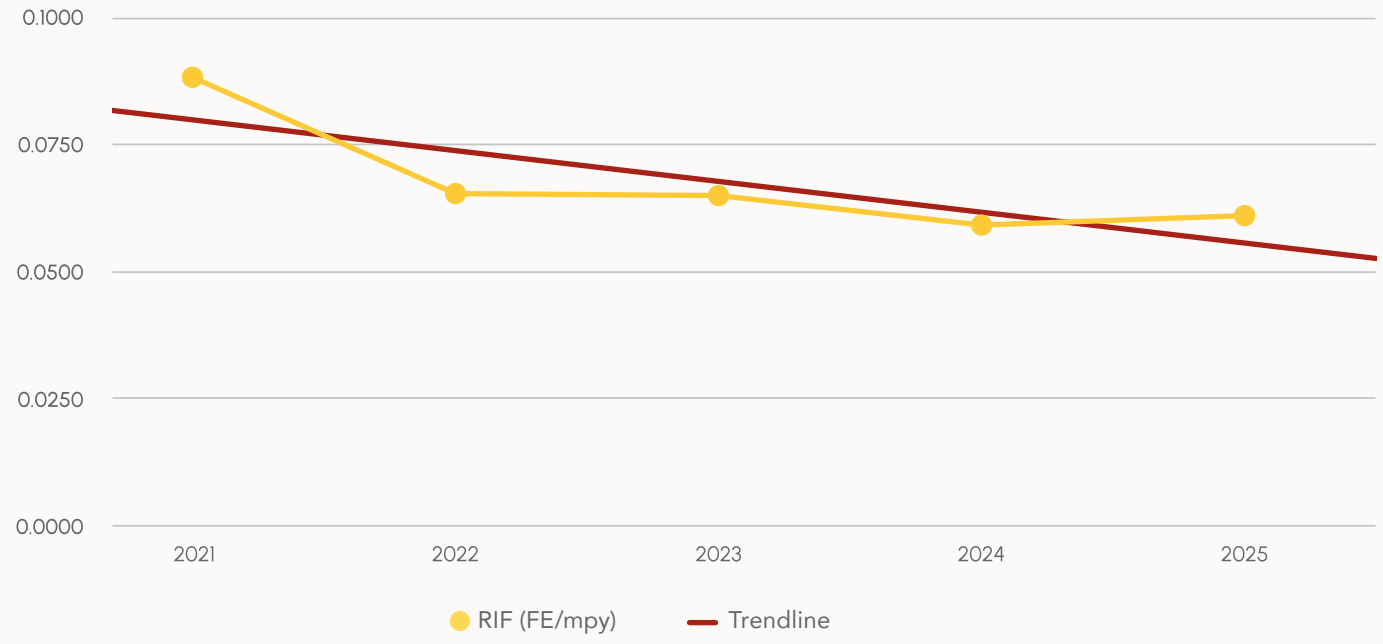
3 Metric is based on 923 active amusement rides as of FY25. The number of rides permitted to operate over the calendar year at any point of time is 1,984. The value in public safety report focuses on the active devices at the end of the TSSA fiscal year.

Figure B1: 10-Year Observed Injury Burden Trend for Amusement Devices



Over the past 10 years, while remaining at a low level, the OIB in the Amusement Devices Program has experienced fluctuations. There was a notable drop in injuries and fatalities due to lower use of amusement rides during the COVID-19 pandemic period. Since 2022, it has been trending back to the pre-pandemic average level.

Figure B2: Risk of Injury or Fatality for Amusement Devices (2021-2025)



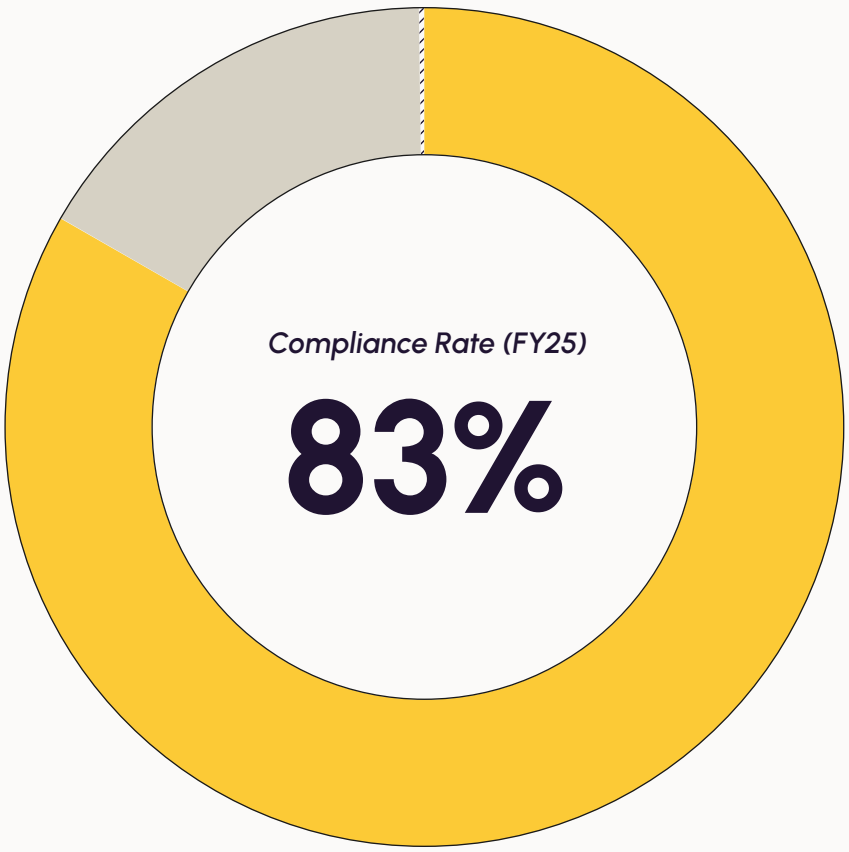
TSSA's RIF estimates the potential for injury or fatality by performing a Monte Carlo simulation on 10-year historical data. In FY25, the RIF in amusement devices was at 0.06 FE/mpy (Fatality Equivalent per million people per year). Notably, the RIF has been declining since 2021.

Inspection Results

TSSA conducts a variety of inspection types including periodic and non-periodic inspections every year. Figure B3 below is a breakdown of the results of AD program periodic inspections conducted in FY25.

In FY25, the AD program completed a total of 1,800 periodic inspections, of which 1,499 were compliant, 297 failed and 4 fell under the "Other" category. This results in a compliance rate of approximately 83%, indicating that a majority of devices met the regulatory and code safety requirements and did not have any observed high-risk non-compliances.

Figure B3: Periodic Inspection Results



High-risk Amusement Devices in FY25

Number of High-risk Amusement Devices

1 *in FY25, 9 devices in FY24*

Percentage of High-risk Inventory

0.03%

Top High-risk Issues from Periodic Inspections (FY25)

Compliance Issue	*Total Number of Orders Issued*
Make sure all bolts, screws, and other fasteners are tightly and properly attached.	**42**
The owner must make sure a certified water slide mechanic is regularly checking and maintaining the rides, and that these maintenance checks are written down in the logbook.	**34**
Check that all electrical cords, cables, and equipment are in good shape with no visible damage like cuts, frays, or cracks.	**33**

Spotlight: "Maintaining" Amusement Ride Safety

↗ *Stock photo: Roller coaster inspection*

In FY25, the top high-risk compliance issues found during periodic inspections of amusement devices suggested that proper maintenance is just as critical as installation when it comes to amusement ride safety. Regular upkeep ensures rides remain safe throughout their lifespan. Real-world examples prove the importance of regular maintenance. In one instance, a cracked roller coaster axle found during a routine inspection was repaired before failure. In another, early corrosion on a Ferris wheel support was addressed in time to prevent structural damage. Diligent maintenance can safeguard both people and property.

TSSA continues to reinforce that safe operation, preventative maintenance and proper certification and training of personnel is the cornerstone of amusement device safety.

Layered Maintenance: A Tightly Knit Safety Net

Owners and operators play a critical role in ensuring the safety of amusement rides through routine inspections, component checks, and strict adherence to manufacturer guidelines.

Meticulously engineered to operate within specific parameters set by their Original Equipment Manufacturers (OEMs), such as detailed inspection schedules, part replacement timelines, and strict performance tolerances, any deviations from these guidelines can potentially lead to mechanical wear, hidden fatigue, or even dangerous failures of the devices.

Effective maintenance is a layered process that builds a strong foundation for safety. Daily checks focus on restraints, controls, and fluid levels. Weekly tasks include lubricating components, testing sensors, and tightening connections. Monthly activities involve comprehensive structural inspections, system diagnostics, and reviewing maintenance logs. Together, these layers form a tightly knit safety net where no part should be overlooked.

"We often focus on technology and design innovations when we think about safety," said Sonny Silva, Regional Supervisor of Amusement Devices at TSSA. "But it's really the regular maintenance that provides a strong line of defence. Time and again, early problem detection through maintenance has prevented serious incidents and kept riders safe."

As the regulator, TSSA ensures ride safety and regulatory compliance through inspections and audits, while also supporting owners and operators with bulletins, training, and seasonal readiness programs that help strengthen operators' day-to-day maintenance efforts. In addition, TSSA works closely with Original Equipment Manufacturers (OEMs) and global standards organization ASTM International to ensure that compliance standards and processes are aligned with technological advancements, evolving industry needs, and global safety benchmarks.

Boilers and Pressure Vessels

TSSA's Boilers and Pressure Vessels Safety Program regulates the design, construction, maintenance, use, operation, repair and service of all pressure retaining components manufactured or used in Ontario. This includes equipment that produces and distributes hot water, steam, compressed air, and other compressed liquids and gases used in commerce and industry.

TSSA is involved in all aspects of the lifecycle of pressure vessels: from design, manufacture and installation to operation, maintenance and decommissioning.

TSSA conducts engineering reviews, examines pressurized equipment and facilities prior to start-up, conducts periodic inspections on uninsured boilers and pressure vessels, surveys quality programs for equipment manufacturers, and certifies inspectors employed by insurers licensed to conduct periodic inspections of insured equipment.

At a Glance

Certificate of Competency Holders

182

Certificate of Authorization Holders

3,066

Certificates of Inspections Issued

20,591

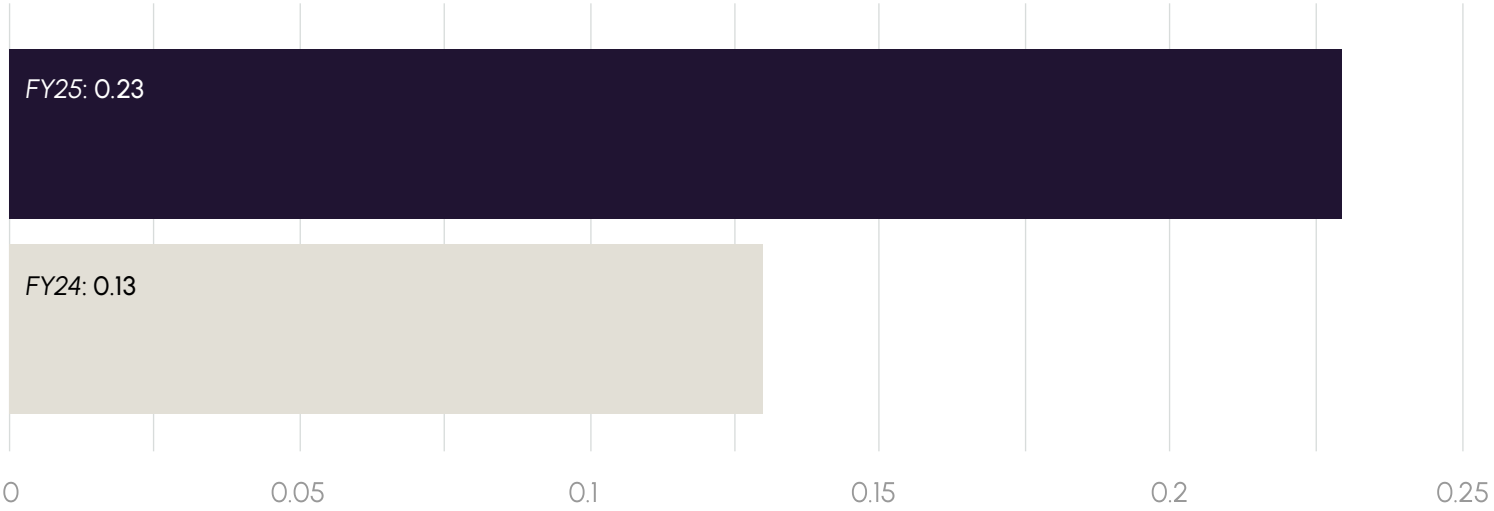
Incidents, Injuries and Fatalities

Over the past 10 years, we have seen a stable state of safety in the Boilers and Pressure Vessels (BPV) Safety Program area with no injuries or fatalities reported. TSSA continues to identify opportunities to improve data collection, specifically around reporting for incidents and near-misses.

Incidents

Reporting Period	*Incidents*	*Non-Permanent Injuries*	*Permanent Injuries*	*Fatalities*
10-year average	90	0	0	0
FY25	109	0	0	0

Incidents per 100 authorized Boilers and Pressure Vessels



TSSA's Risk of Injury or Fatality (RIF) estimates the potential for injury or fatality by performing a Monte Carlo simulation on 10-year historical data. In FY25, the RIF in BPV was 0.001 FE/mpy (Fatality Equivalent per million people per year). Along with the OIB, these two metrics have remained consistently low in the previous years.

The majority of licensed BPVs in the province are periodically inspected by third-party insurance inspectors who are required to submit a record of inspection to TSSA. TSSA inspectors conducted 1,546 periodic inspections in FY25.

Top High-risk Issues from TSSA Inspections (FY25)

Compliance Issue	*Total Number of Orders Issued*
Equipment not serviced in accordance with maintenance lists and manufacturer's recommendations.	**78**
The danger shall be removed, including affixing the seal, disconnecting the power, or other means.	**32**
The Float type Low Water cutoff shall be dismantled, cleaned to ensure it is free from sludge or other accumulation, and the linkage and connections examined for wear and tear. Satisfactory operation shall be demonstrated to the TSSA Inspector.	**27**

The above includes Orders from inspection types:

- First Installation
- Periodic Inspections
- Periodic Inspections - Nuclear

Spotlight: A Periodic Touchpoint for Keeping Ontario's Energy Facilities Safe

↗ *Stock photo: An inspection in a boiler room*

In Ontario, the majority of licensed boilers and pressure vessels (BPVs) in the province are periodically inspected by third-party insurance inspectors who are required to submit a Record of Inspection (ROI) to TSSA.

When repairs are needed, facilities must contact their insurer to oversee the work and ensure compliance with safety standards. However, situations may arise whereby some facilities begin repairs without notifying or involving their insurer's inspector, are unable to arrange for the required oversight by the insurers' inspectors, or are faced with insurers who do not provide repair inspection services – at which point in time the facility would then involve TSSA to complete the process.

Reducing Unnecessary Burden on BPV Owners

"When these situations do arise, TSSA and industry work together to ensure there is no gap," says TSSA's Sorin Corlaci, Regional Supervisor, BPV Safety Program." As energy facilities are critical, the sooner repairs get done, the better. Our priority is to promote compliance and reduce unnecessary burdens on businesses," added Corlaci.

Maintaining open communication with ongoing support is key, and TSSA will continue to work closely with insurers and the regulated sector to uphold BPV safety. TSSA also remains committed to strengthening industry skills and raising awareness of the requirements that support BPV safety.

Elevating Devices:

Elevators

TSSA's Elevating Devices Safety Program regulates elevators in Ontario to ensure all devices conform to the Act and applicable regulations, codes and standards. This includes: passenger, freight, hand-powered, observation, sidewalk, temporary, limited use/application elevators, dumbwaiters, material and freight platform lifts, lifts for persons with physical disabilities, man-lifts, construction hoists, incline lifts, stage lifts, and parking garage lifts.

TSSA reviews and register elevators, issues licences, conducts inspections, performs incident investigations, provides engineering services, registers contractors and certifies mechanics.

TSSA works closely with industry, through advisory councils and technical risk reduction committees, to propose improvements and implement effective safety strategies and solutions. Collectively, TSSA strives to ensure a safe environment for the riding public.

At a Glance

Compliance Rate FY25

Elevators

71%

Number of Authorized Elevators

65,620 *All types*

49,072 *Passenger Elevators*

16,548 *Non-Passenger Elevators*

Registered Contractors

ED Program

163

Certified Mechanics

ED Program

4,679

Approved Engineering Designs

Elevators

1,964

Owners

Elevators

23,007

Incidents, Injuries and Fatalities

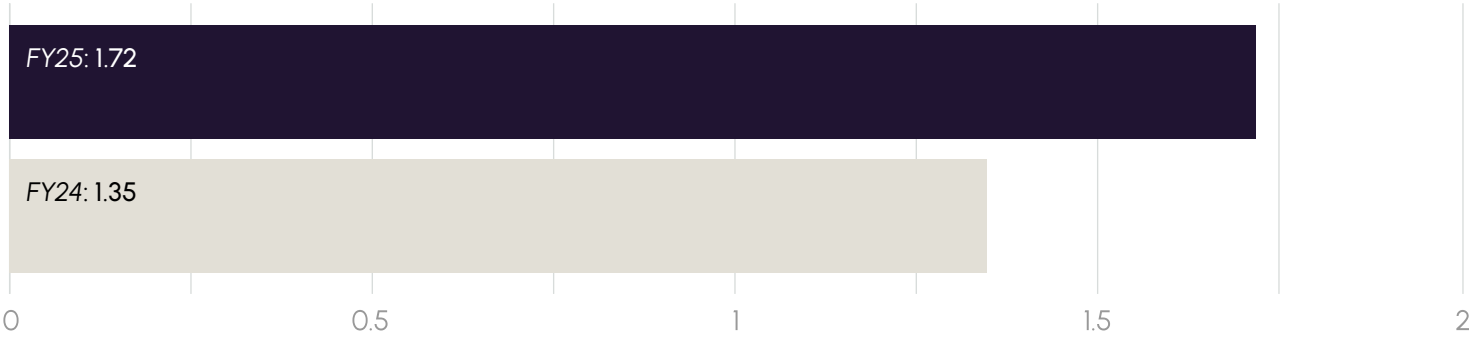
In FY25, a total of 1,111 elevator safety-related incidents were reported—a notable increase above the 10-year average. Several factors contribute to this rise, including population growth, post-COVID -19 pandemic recovery, and modified reporting mechanisms.

Despite the increase in reported incidents, the severity of outcomes has declined. There were no fatal injuries in FY25, and the number of non-permanent injuries dropped to 52, the lowest in the past decade. Permanent injuries have also remained low at 5, consistent with the downward trend observed in recent years. This suggests that while more incidents are being captured, their consequences have become less severe, indicating potential improvements in safety measures.

Incidents

Reporting Period	*Incidents*	*Non-Permanent Injuries*	*Permanent Injuries*	*Fatalities*
10-year average	730	110	7	0.4
2025	1,111	52	5	0

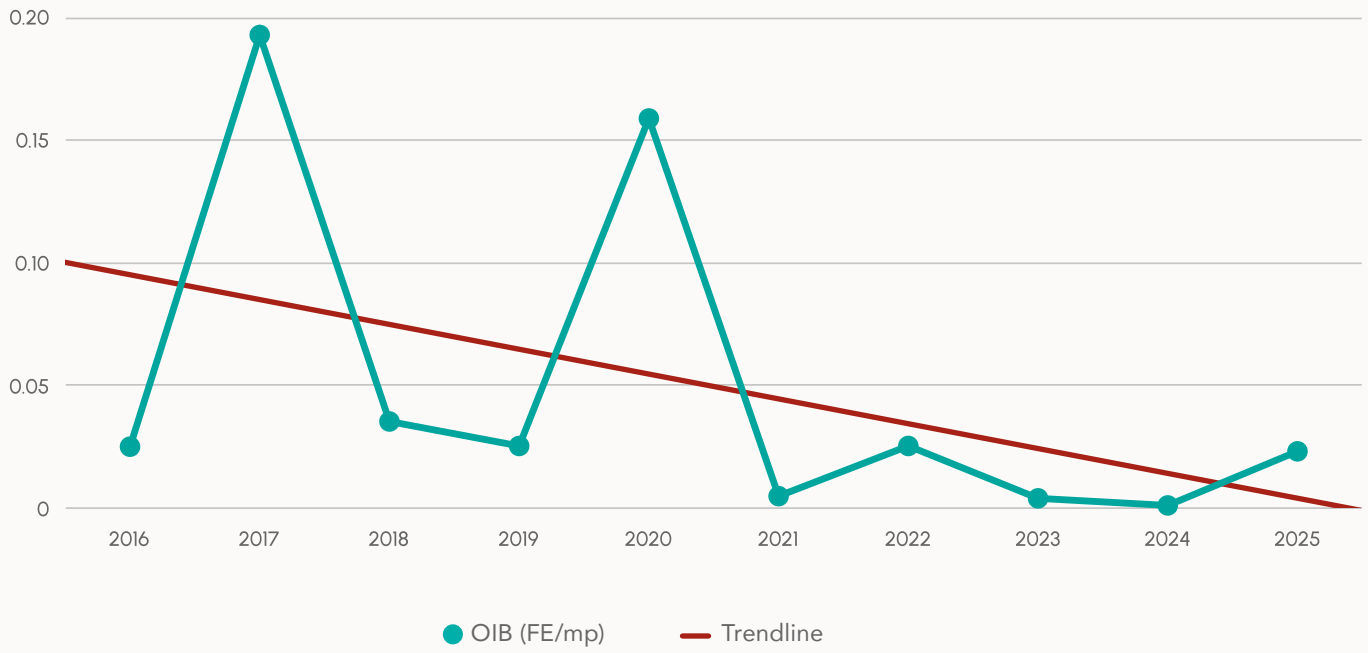
Incidents per 100 Authorized Elevators in Ontario



Distribution of Incidents by Elevator Building Types (2016-2025)

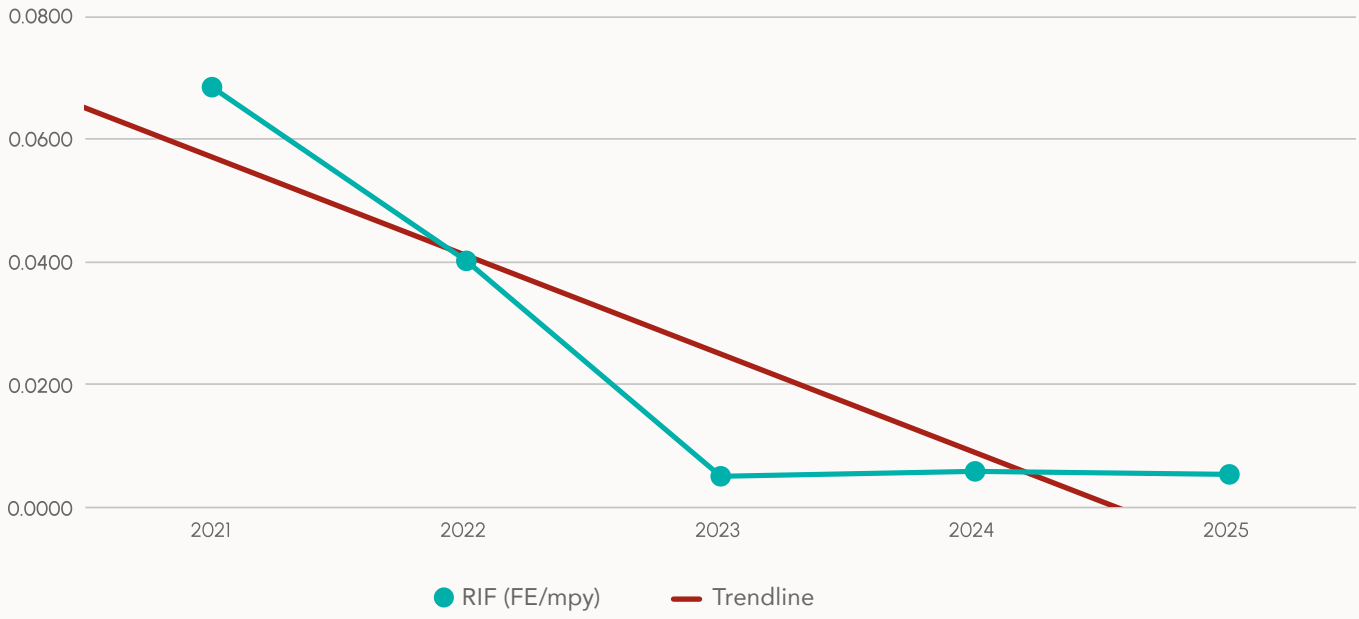
The number of elevator incidents is higher in rental apartments and condominiums, primarily due to the higher frequency of elevator usage in these residential buildings. Together, rental apartment buildings and condominiums account for 39% of all elevators across Ontario, contributing significantly to the overall incident count

Figure C1: 5-Year Observed Injury Burden Trend for Elevators in Ontario



Over the past ten years in Ontario, injuries have fluctuated while fatalities have remained low. In FY25, the OIB was 0.0229, an increase from 0.0008 in FY24, but still on a downward trend, as seen over the past 10 years. This represents an over 85% reduction from the highest levels seen in the past decade, highlighting the long-term progress in reducing injury burden across the sector.

Figure C2: Risk of Injury or Fatality for Elevators (2021-2025)



TSSA's RIF estimates the potential for injury or fatality by performing a Monte Carlo simulation on 10-year historical data. In FY25, the RIF for Elevators was at 0.0053 FE/mpy. The metric has been stable since 2023.

Inspection Results

TSSA conducts a variety of inspection types including periodic and non-periodic inspections every year. Figure C3 below is a breakdown of the results of periodic inspections conducted in FY25 indicating compliance of the program.

In FY25, a total of 10,034 periodic inspections were completed. Of these, 7,179 compliant with no high-risk orders issued, 2,772 failed, and 83 were categorized as "Other". This results in a compliance rate of 71%, reflecting ongoing efforts to improve compliance of the industry through various support and education activities.

Figure C3: Periodic Inspection Results

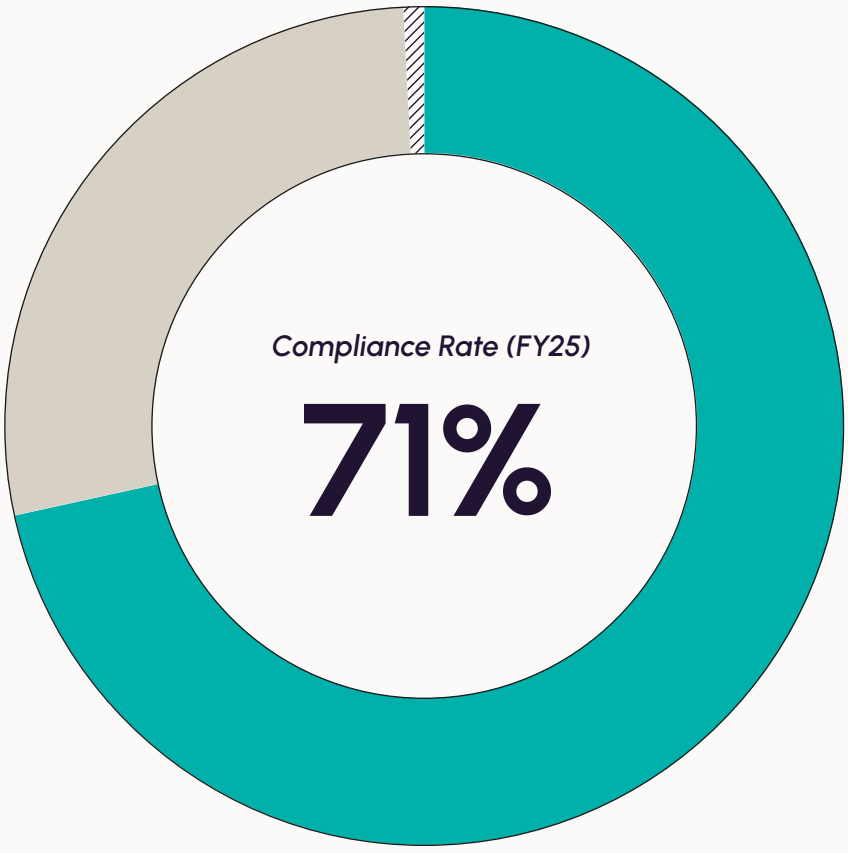


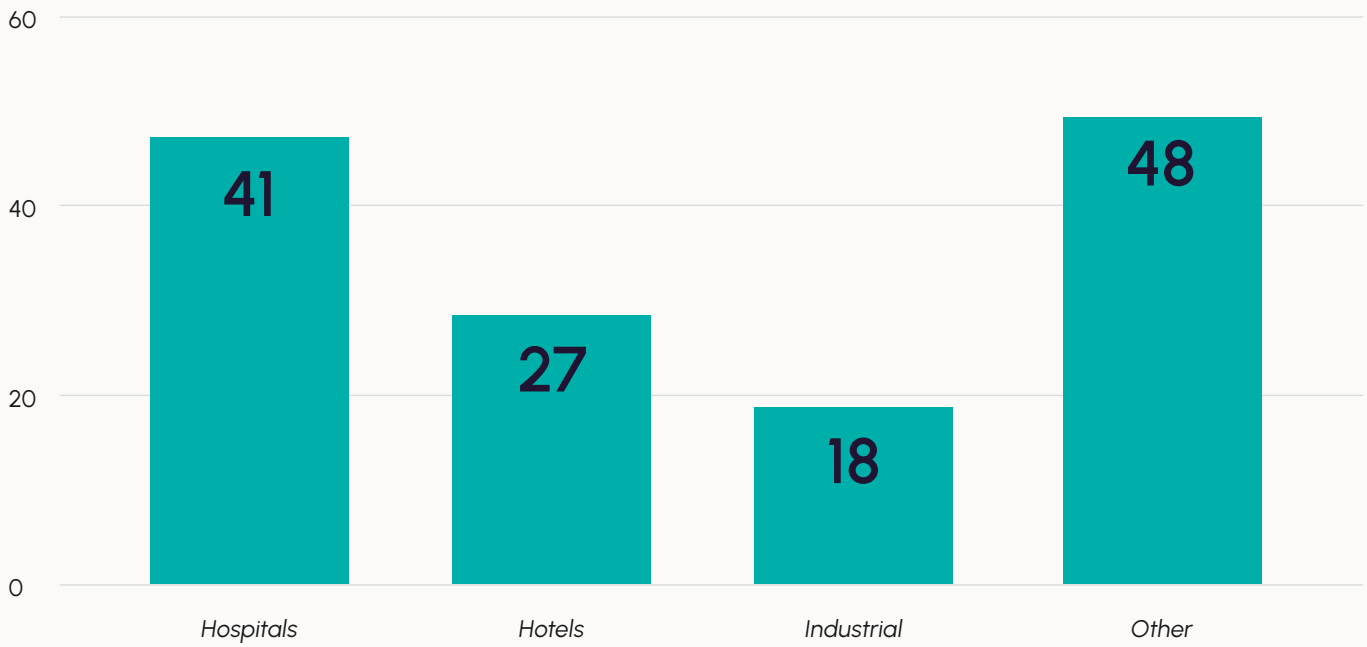
Figure C4: High-risk Elevators in FY25

Number of High-risk Elevators

134 *in FY25, 167 devices in FY24*

Percentage of High-risk Inventory

0.26%



Top High-risk Issues from Periodic Inspections (FY25)

Compliance Issue	*Total Number of Orders Issued*
Restrict hoist-way or car door opening annual periodic task not complete and records not maintained.	558
Car emergency system maintenance not completed and log book not updated.	512
Scheduled maintenance task not complete and logbook not signed to confirm compliance.	439

Spotlight: "Mind the Doors": A Safety Reminder for Elevator Users

Stock photo: Family in an elevator

In FY25, 52 non-permanent injuries were reported in the elevator sector, all involving individuals being struck by elevator doors at various locations across Ontario. In some cases, door sensors did not respond in time or the door-closing force slightly exceeded code limits. In others, people came into contact with the doors before they had fully opened or closed. These incidents occurred in residential buildings, workplaces, hospitals, medical centres, and libraries — everyday spaces where people live, work, and receive care.

TSSA responded to these incidents by conducting investigations where necessary, reviewing maintenance records, and issuing repair orders when non-compliances were found. Where low risks were identified, certified maintenance contractors were requested to inspect the devices and submit documentation confirming the devices remained safe to use.

A Shared Responsibility for Everyday Safety

Maintaining elevator safety is a shared responsibility. While technology, inspections, enforcement and education play essential roles, user behaviour and mindfulness remain a major component of safety. Pausing and paying attention when approaching or exiting an elevator can help reduce the likelihood of incidents and contribute to overall safety.

"Elevators are part of our everyday lives, and they work best when everyone has the opportunity to use them with care," said Christina Passfield, Regional Supervisor of Elevating Devices Safety Program at TSSA. "We encourage Ontarians to 'mind the doors' out of care for themselves and others. Through stronger safety oversight and everyday awareness, we can work together to foster a culture of safety in Ontario's built environment."

TSSA provides elevator safety resources including important reminders like the ones below. To learn more, visit TSSA's consumer-focused website safetyinfo.ca for additional resources, including short videos and other safety tips.

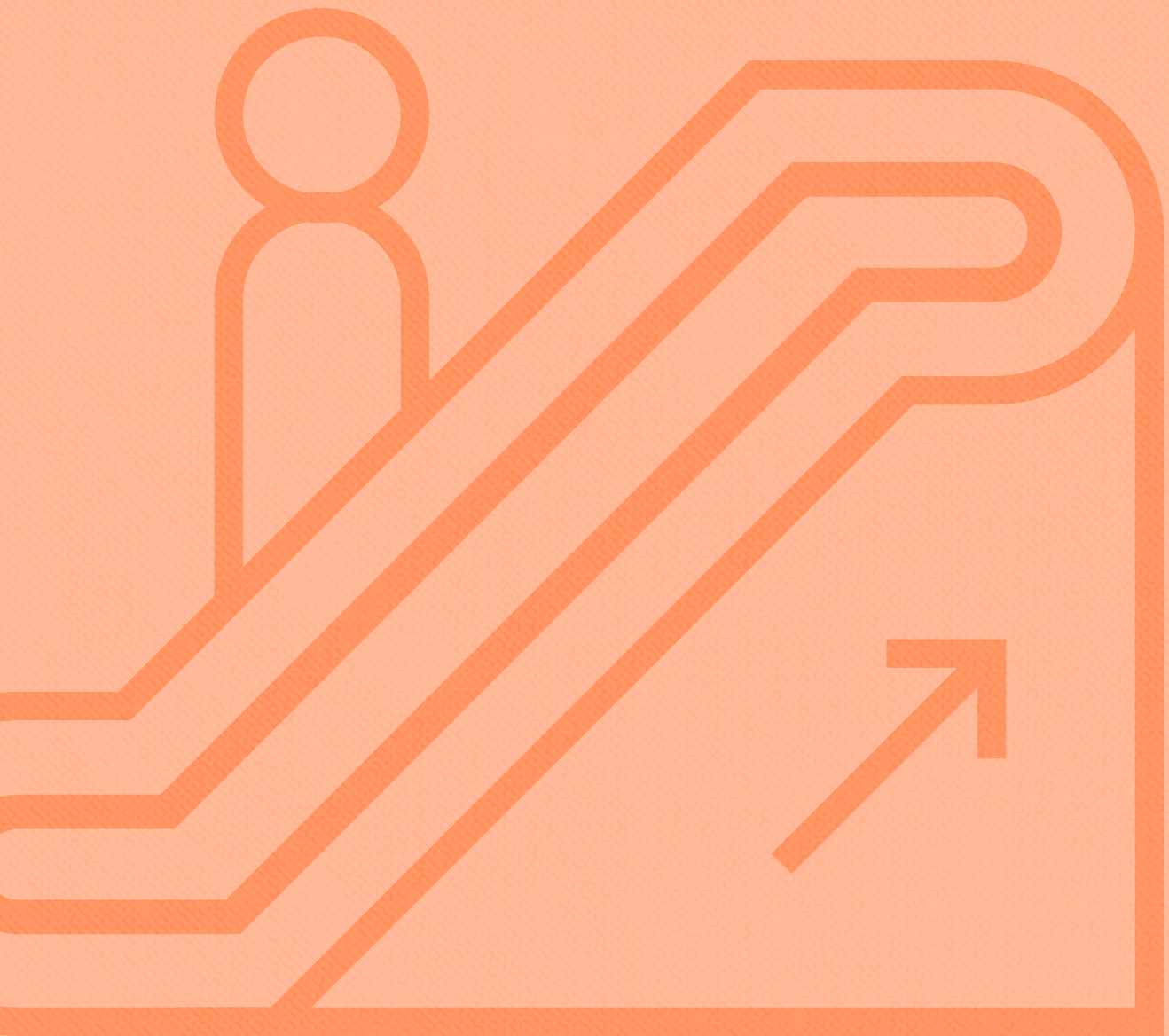
Elevator Safety Tips

1. Don't charge or run through closing doors
2. Use the button - not hands or legs - to stop a closing door
3. Watch your step when getting on or off
4. Stay in the elevator if power fails or elevator stops

TSSA elevator safety reminder

Elevating Devices:

Escalators and Moving Walks



TSSA's Elevating Devices Safety Program regulates escalators and moving walks in Ontario to ensure all devices conform to the Act and applicable regulations, codes and standards. TSSA reviews and registers escalator and moving walks, issues licences, conducts inspections, performs incident investigations, provides engineering services, registers contractors and certifies mechanics.

TSSA works closely with industry, through advisory councils and technical risk reduction committees, to propose improvements and implement effective safety strategies and solutions. Collectively, TSSA strives to ensure a safe environment for the riding public.

At a Glance

Compliance Rate FY25

Escalators and Moving Walks

42%

Number of Authorized Devices

Escalators and Moving Walks

2,369

Approved Engineering Designs

Escalators and Moving Walks

41

Owners

Escalators and Moving Walks

358

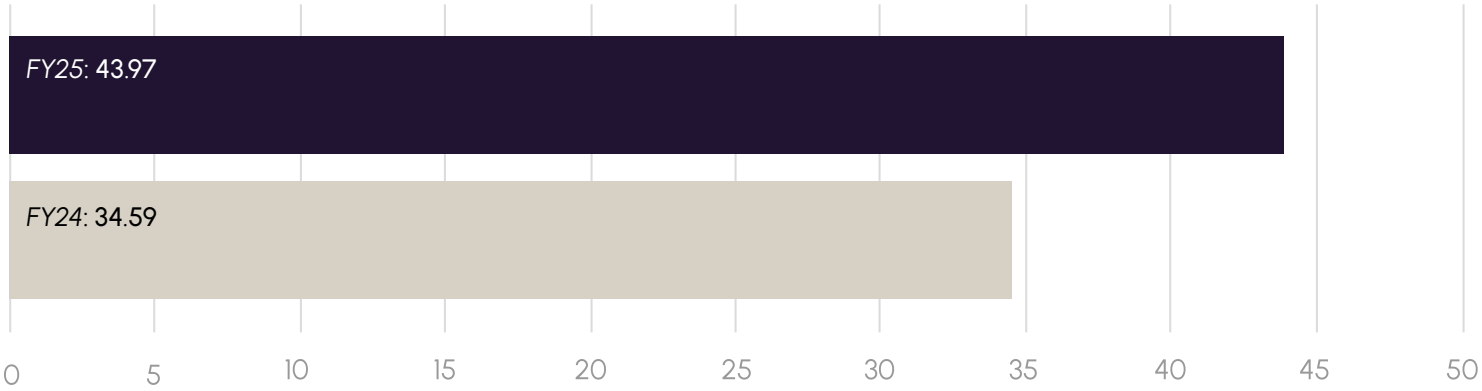
Incidents, Injuries and Fatalities

In FY25, escalator and moving walk related incidents increased to 930, up from the 10-year average of 703, largely due to population growth and usage of escalators in public transportation facilities. Unfortunately, one fatality occurred this year involving an elderly individual. It is important to note that non-permanent injuries slightly decreased compared to the average, and the system continues to serve millions of riders safely. The fatality of the elderly individual reinforces the need for continued focus on public education efforts on the safe usage of escalators.

Incidents

Reporting Period	*Incidents*	*Non-Permanent Injuries*	*Permanent Injuries*	*Fatalities*
10-year average	703	407	4	0.4
FY25	930	398	6	1

Incidents per 100 authorized Escalator and Moving Walks in Ontario

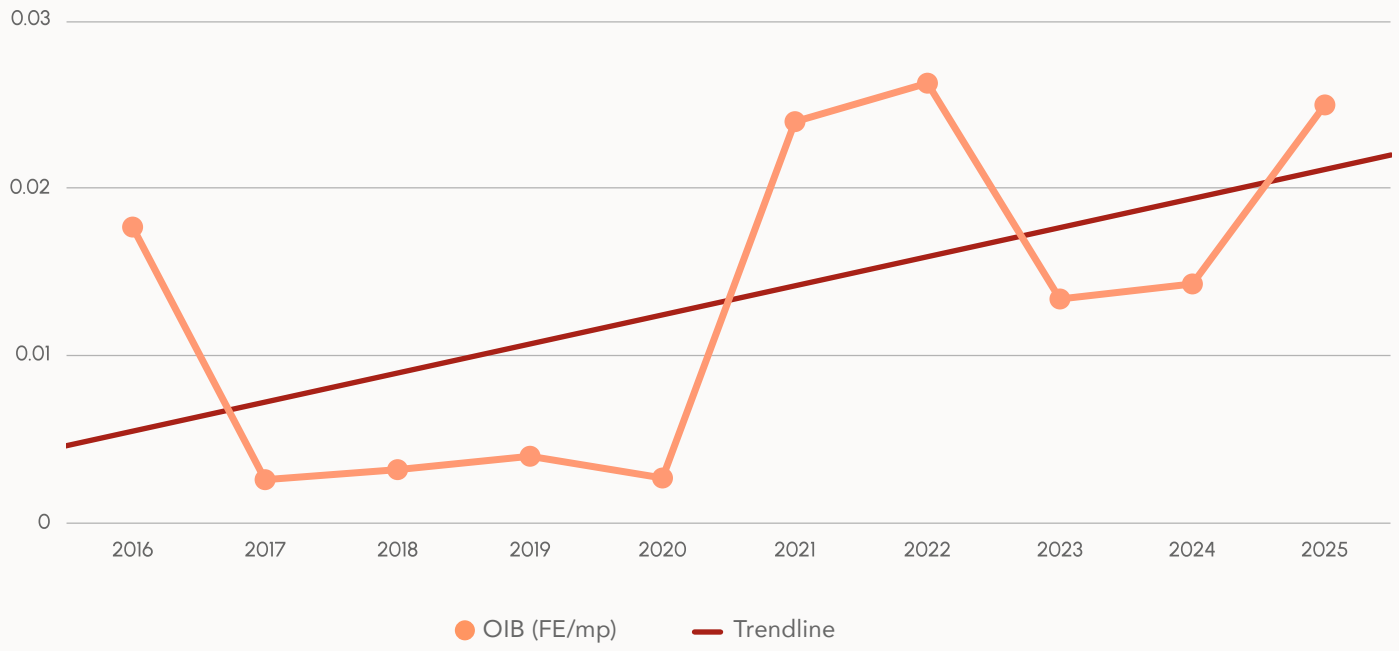


Distribution of Escalator and Moving Walks Incidents by Building Types (2016-2025)

While Mass Transportation and Mercantile account for 92.9% of all incidents for the escalator and moving walks program over the past 10 years, they represent only 40.4% and 24.9% of the total escalator inventory, respectively so the higher incident rate is correlated to the usage volume on such devices.

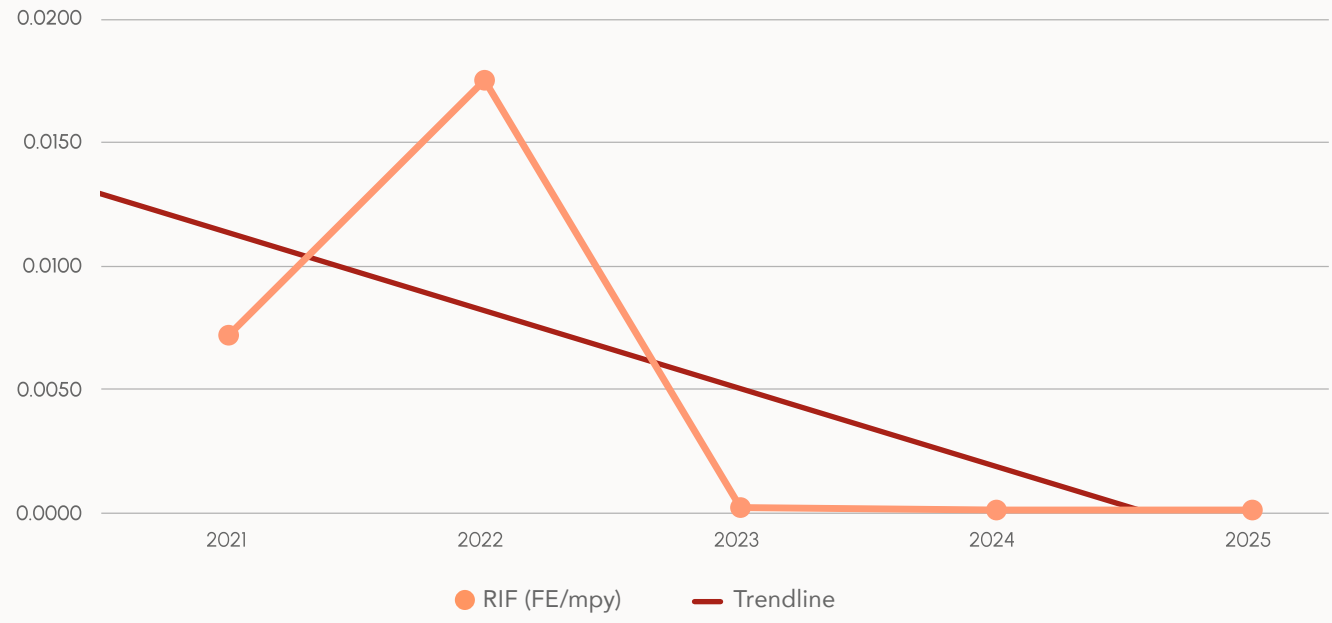
*Offices and Other Building Types
(such as retail shopping centres, hotels, assemblies etc)

Figure D1: 10-Year Observed Injury Burden Trend for Escalators and Moving Walks in Ontario



While non-permanent and permanent injuries have fluctuated over the past ten years, there has been one fatality during each of the last 3 years. As a result, the OIB for the past 2 years has been increasing.

Figure D2: Risk of Injury or Fatality for Escalators and Moving Walks (2021-2025)



TSSA's RIF estimates the potential for injury or fatality by performing a Monte Carlo simulation on 10-year historical data. In FY25, the RIF for Escalators and Moving Walks was at 0.0001 FE/mpy. The RIF has been stable since FY23.

Inspection Results

TSSA conducts a variety of inspection types including periodic and non-periodic inspections every year. Figure D3 below is a breakdown of the results of periodic inspections conducted in FY25.

In FY25, a total of 524 periodic inspections were conducted; of these, 222 were compliant, 291 failed, and 11 were categorized as "Other". This results in a compliance rate of 42%, highlighting the need for continued focus on escalator maintenance and compliance efforts.

Figure D3: Periodic Inspection Results

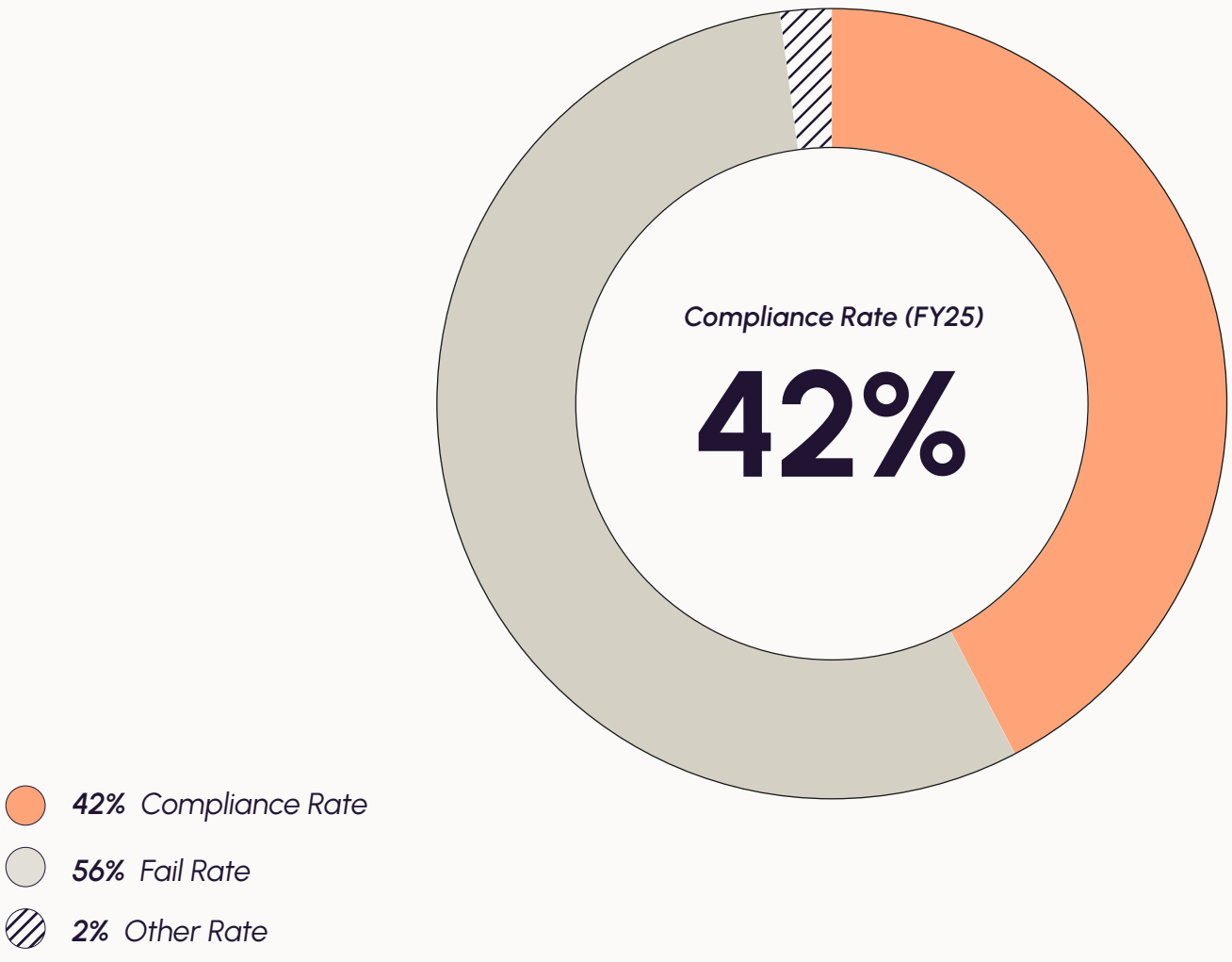


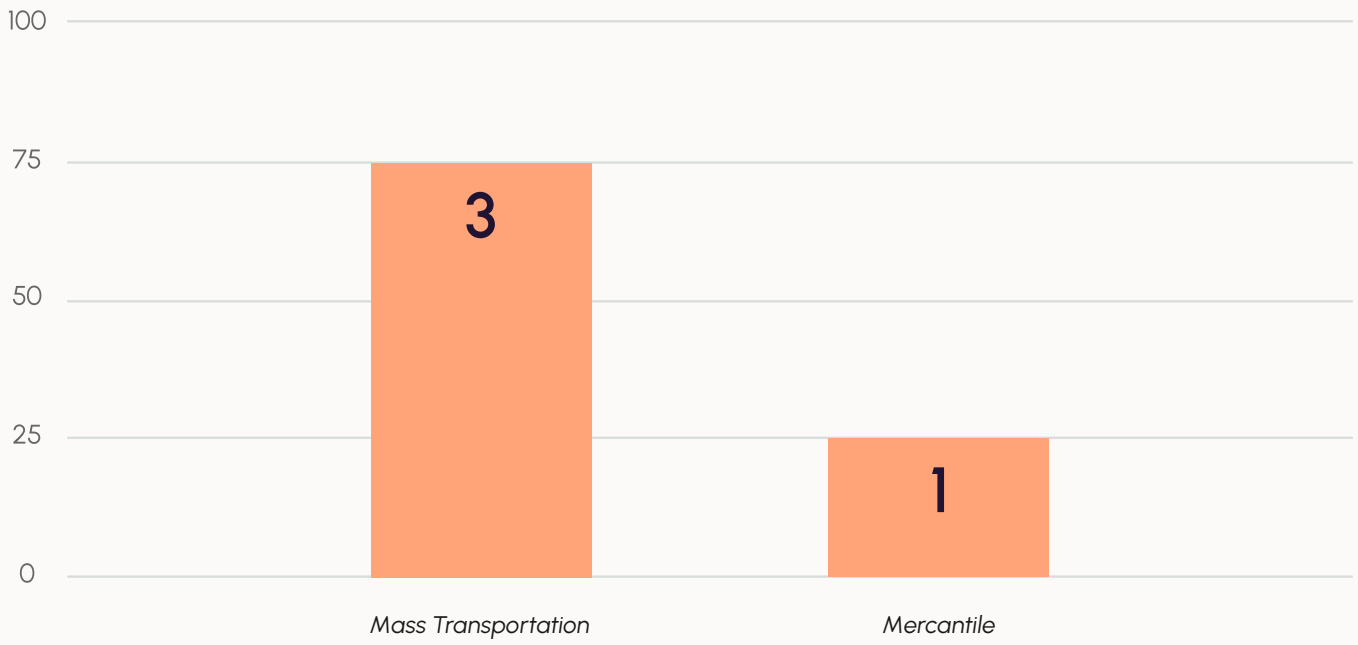
Figure D4: High-Risk Escalator and Moving Walks in FY25

Number of High-risk Escalators and Moving Walks

4 *in FY25, 4 devices in FY24*

Percentage of High-risk Inventory

0.23%



Top High-risk Issues from Periodic Inspections (FY25)

Compliance Issue	*Total Number of Orders Issued*
Maintain records of escalator startup procedure trained personnel and make it available for inspector.	43
The step demarcation lights inoperative.	43
The comb with any broken teeth shall be repaired/replaced.	38

Spotlight: "Escalating" Safety for Seniors on the Move

Stock photo: Safety signage on an escalator

Despite escalators moving millions of users safely on a daily basis in Ontario, one serious incident in FY25 involving an elderly person with a mobility device unfortunately resulted in a fatality.

TSSA's investigation concluded that the equipment was functioning properly and met all safety code requirements and that signage advising individuals using mobility aids to take the elevators was posted nearby.

Know the Risks, Choose the Safer Ride Option

This incident reinforces that public education is a key risk mitigation tool to promote safe riding behaviour and alternatives like using elevators when and where available. It also highlights the unique risks older adults may face when using escalators, particularly when assisted by mobility devices or when carrying bulk items, for example.

"One incident is always one incident too many, let alone the likes of the serious ones" says Gilbert Timmons, TSSA inspector. "Incidents like this highlight the importance of safety awareness for vulnerable populations including addressing potential mobility needs through alternate options, when and where available."

TSSA remains committed to public education through safety campaigns, communication outreach, and by supporting initiatives that empower older adults to ride safely. By working together with community partners, public safety across Ontario can continue to improve for everyone.

Below is a quick reminder of some smart escalator safety tips. For more resources, including videos and activity sheets, visit http://www.safetyinfo.ca.

Escalator Safety Tips

1. Hold on to the handrails
2. Stand in the middle of the stairs and hold your child's hand
3. Be careful of footwear
4. Use elevators not escalators for strollers or other mobility devices

TSSA's escalator safety tips reminder

Elevating Devices:

Passenger Ropeways and Ski Lifts

TSSA's Ski Lifts Safety Program regulates the safety of passenger ropeways and ski lifts in Ontario, including chair lifts, bar lifts, passenger conveyors, gondola lifts, reversible ropeways, passenger ropeways, rope tows, tube tows and aerial tramways.

TSSA reviews and registers lift designs, licenses lift devices, conducts inspections, performs incident investigations and promotes public awareness of safe ski-lift behaviour throughout Ontario. In addition, TSSA certifies ski lift mechanics and registers contractors. Passenger Ropeways and Ski Lifts, hereinafter referred to as Ski Lifts.

At a Glance

Compliance Rate FY25

63%

Number of Devices

212

Approved Engineering Designs

6

Registered Contractors

48

Owners

61

Certified Mechanics

310

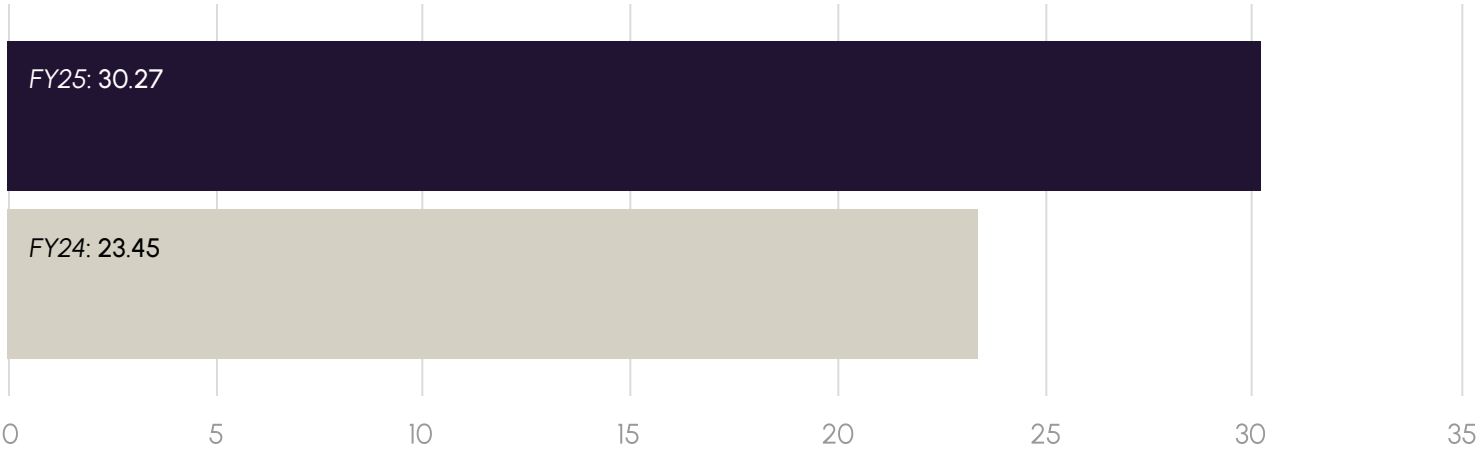
Incidents, Injuries and Fatalities

The total number of incidents in the ski industry has decreased this year compared to the 10-year average. Injury rates within the Ski program continue to remain low relative to pre-COVID-19 levels.

Incidents

Reporting Period	*Incidents*	*Non-Permanent Injuries*	*Permanent Injuries*	*Fatalities*
10-year average	69	51	3	0
FY25	66	43	3	0

Incidents per 100 authorized Ski Lifts in Ontario

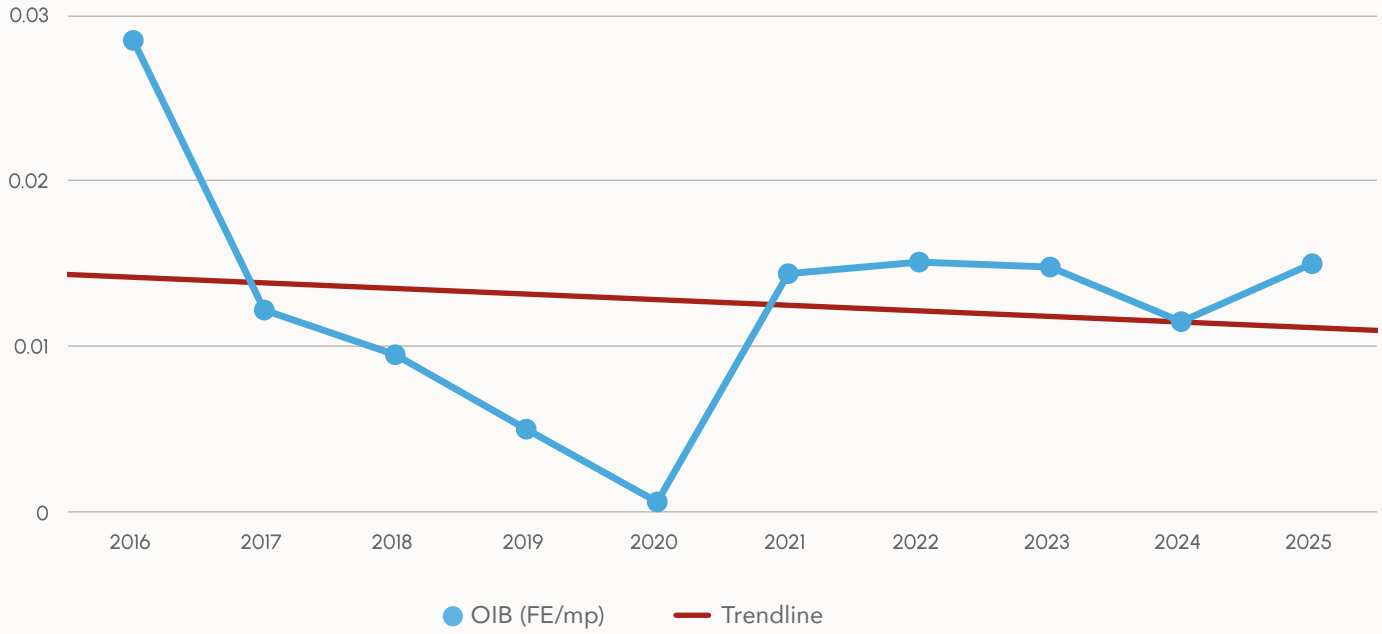


Distribution of Incidents by Ski Lift Types (2016-2025)

While Chair Lifts account for 78.32% of incidents over the past 10 years, they represent only 53.3% of the total inventory over this period, with just 113 units in operation.

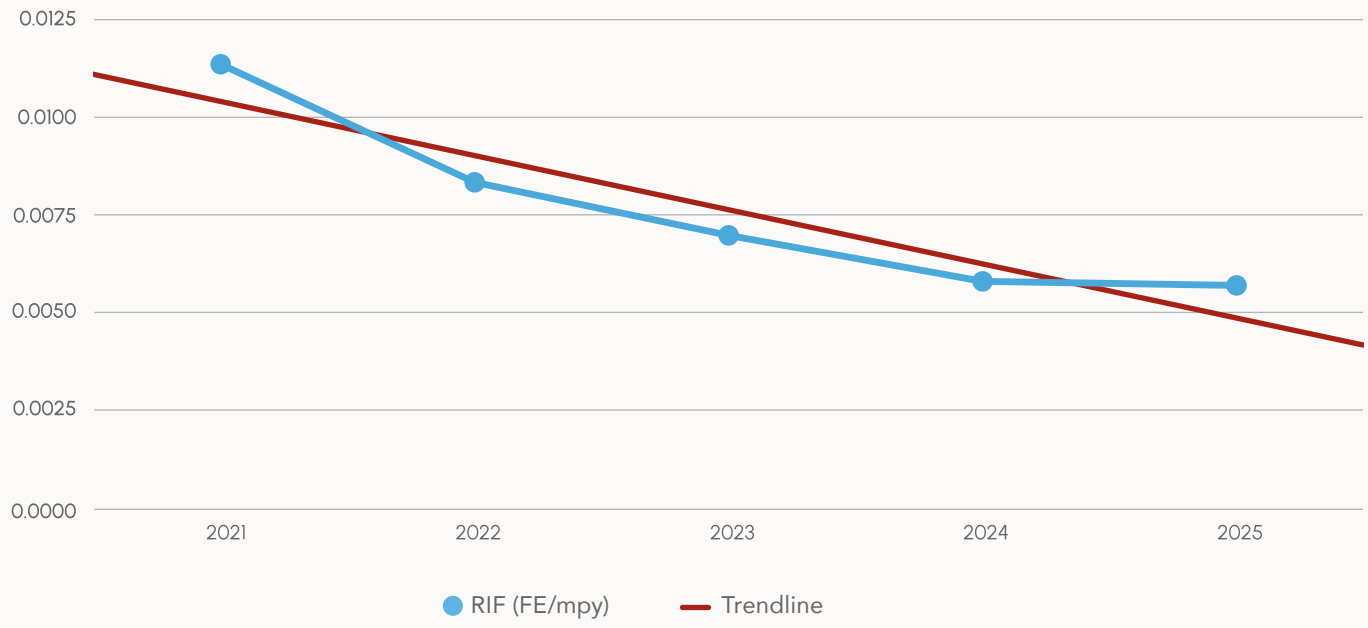
**Ski Passenger Conveyor and Others*

Figure E1: 10-Year Observed Injury Burden Trend for Ski Lifts in Ontario



Trend analysis of the OIB reveals a noticeable drop around FY20. While the OIB values have bounced up, they have since remained stable over the past five years. This sustained improvement may be attributed to enhanced safety protocols, improved training, and advancements in protective equipment, indicating positive progress in injury prevention and risk management.

Figure E2: Risk of Injury or Fatality for Ski Lifts (2021-2025)



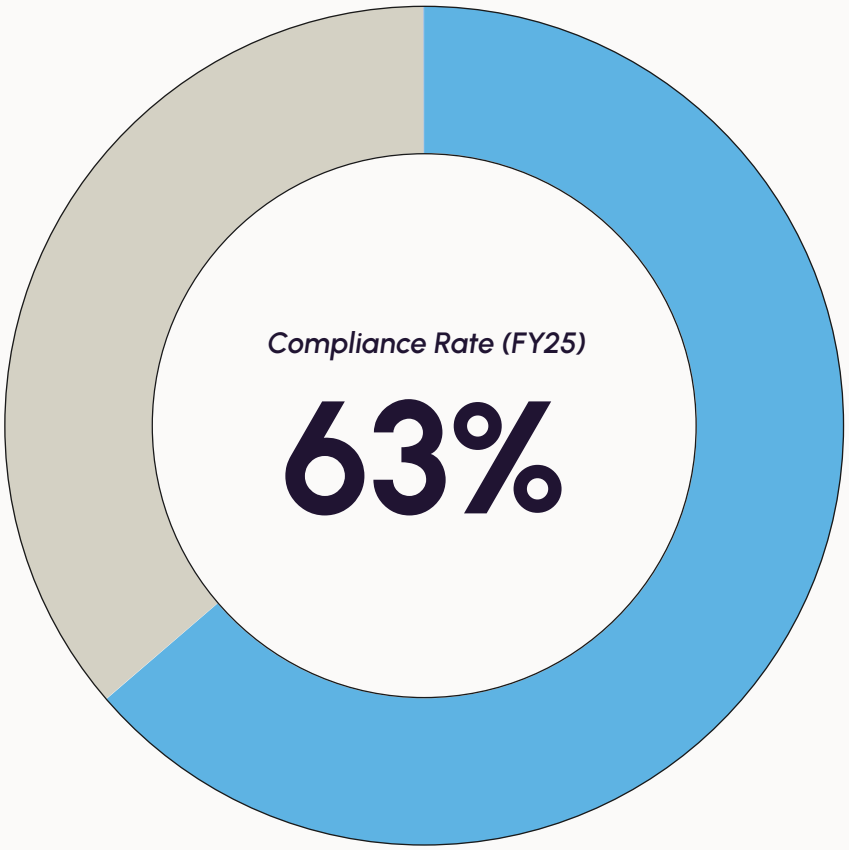
TSSA's Risk of Injury or Fatality (RIF) estimates the potential for injury or fatality by performing a Monte Carlo simulation on 10-year historical data. In FY25, the RIF for Ski Lifts was at 0.0057 FE/mpy. RIF has been decreasing consistently since 2021.

Inspection Results

TSSA conducts a variety of inspection types including periodic and non-periodic inspections every year. Figure E3 below is a breakdown of the results of periodic inspections conducted in FY25.

In FY25, a total of 91 periodic inspections were conducted, with 58 compliant and 33 failed (i.e. had a high-risk observation reported), resulting in a Compliance rate of 63%.

Figure E3: Periodic Inspection Results



- **63%** *Compliance Rate*
- **37%** *Fail Rate*
- **0%** *Other Rate*

High-risk Ski Lifts in FY25

Number of High-risk Ski Lifts	*Percentage of High-risk Inventory*
1 *in FY25, 3 devices in FY24*	0.43%

Top High-risk Issues from Periodic Inspections (FY25)

Compliance Issue	*Total Number of Orders Issued*
The owner or the owner's representative shall be responsible for supervising and training all personnel.	8
A wire rope logbook shall be maintained and shall contain all pertinent information.	5
Remove over hanging tree branches which are encroaching or contacting the carriers.	5

Spotlight: Taking Ski Lift Safety to New Heights

Parent riding ski lift with child

Committed to reducing risks and the potential of harm for skiers and snowboarders across Ontario, TSSA and ski industry partners are focused on prioritizing prevention and taking safety to new heights.

Key improvements include installing video cameras and speakers along lift lines and at loading and unloading zones, enabling real-time monitoring and operator communication. Safety nets and "Kid Stops" help minimize fall hazards, while newer lifts now feature automatic safety bar closers. A major advancement has been adding corral gates at loading areas to prevent passengers from boarding until the chair is in the right position to receive them. These improvements, combined with ongoing public education initiatives and efforts to address user behaviour, are key risk mitigation tools to enhance rider safety.

A Collaborative Approach to Incident Prevention

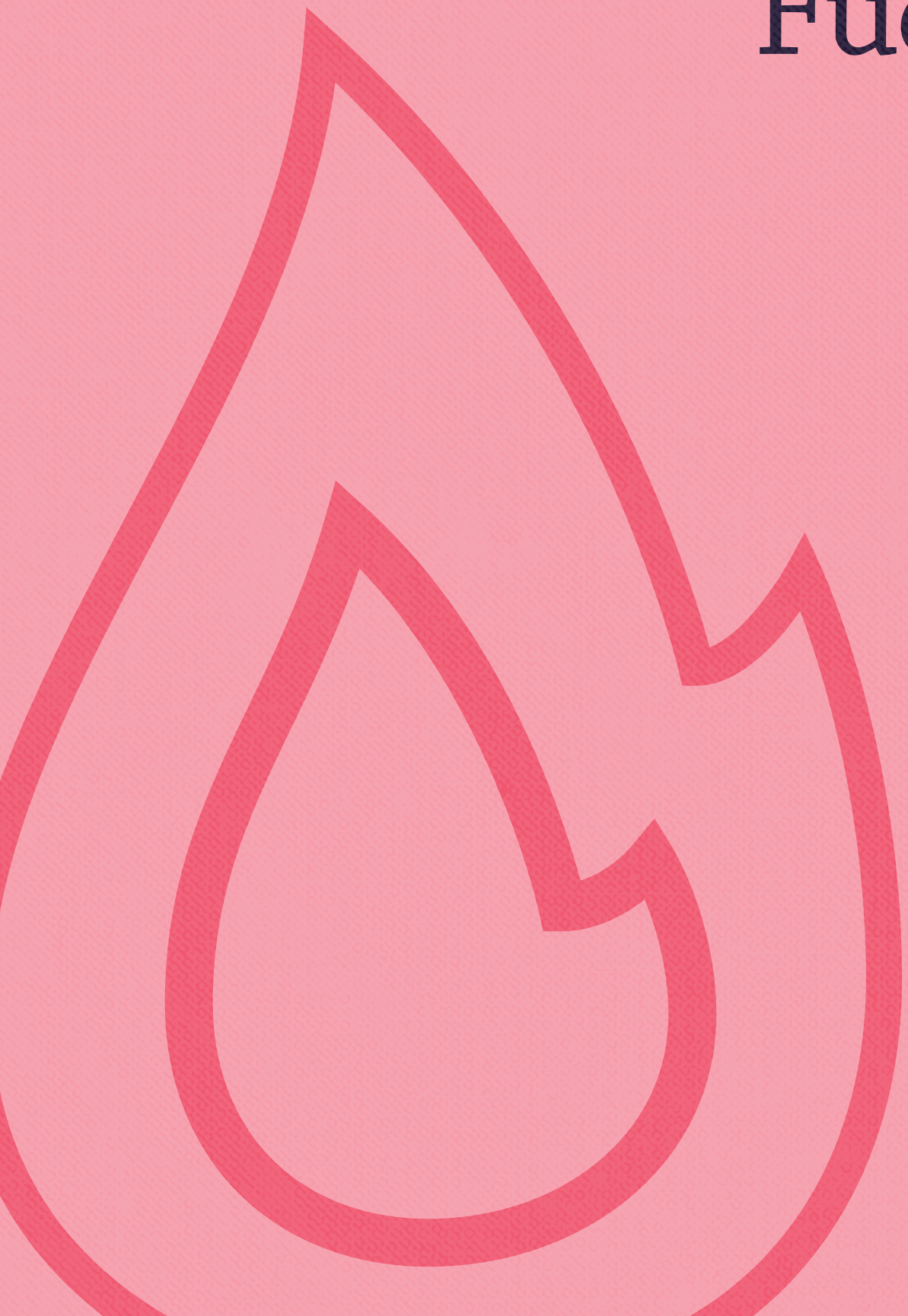
Beyond inspection and enforcement, TSSA is working closely with industry leaders to better educate skiers and snowboarders on the safe use of ski lifts. During the 2024–2025 ski season, TSSA partnered with the Ontario Snow Resorts Association (OSRA), the Canadian Ski Council, and Parachute to help build a stronger safety culture across the ski and snowboard community. Through coordinated campaigns—including resort signage, digital content, and social media—safety messages and reminders were disseminated to help foster good riding behaviour and enhance safety outcomes. View the collaborative signs and other ski safety resources on safetyinfo.ca.

Additionally, safety resource kits, developed jointly by OSRA and the Ontario School Boards' Insurance Exchange (OSBIE), have also been made available for schools ahead of ski trips to help teachers and students prepare for a safer day on the slopes.

"Most ski lift incidents are preventable. With the adoption of new technologies, stronger operational oversight and public education, we can make a difference," says Cy Gray, TSSA's Manager of Investigations. "Ski lift safety is a shared responsibility. By working together, we're not just reacting to incidents, we're reducing the potential of harm and risks before they happen. This can make our safety approach even more effective."

These joint efforts will continue in future seasons to help make Ontario's slopes safer and more enjoyable for skiers and snowboarders alike.

Fuels



TSSA's Fuels Safety Program regulates the transportation, storage, handling and use of fuels in Ontario including natural gas, propane, fuel oil, gasoline, diesel, butane, hydrogen, digester gas, and landfill gas. TSSA carries out inspections and licenses pipelines, gas stations, propane filling stations, marinas and tanker trucks.

TSSA issues licences to operate fuel facilities and pipelines, registers contractors and certifies tradespersons who install and service fuel-burning equipment. TSSA reviews and approves facility plans for TSSA-licensed sites and performs custom equipment approvals and inspections to ensure fuel is handled and used safely.

TSSA investigates incidents and reports of non-compliance and provides technical expertise to industry stakeholders, safety partners and consumers.

At a Glance

Compliance Rate FY25

Liquid Fuels
49%

Propane
65%

Heating Contractors
77%

Registered Contractors

9,115

Certificate Holders

61,461

Accredited Training Providers

131

Heating and Petroleum Contractor Audits

2,258

Incidents, Injuries and Fatalities

The total number of incidents decreased in FY25 compared to the 10-year average despite enhancement in TSSA's incident reporting process. There was a 6.25% decrease in non-permanent injuries and a significant, 72.7% decrease in the number of permanent injuries compared to the 10-year average. The number of fuel related incidents (excluding pipeline strikes) per million people has decreased from 81 in FY16 to 59 in FY25 – a measurable improvement.

Incidents

Reporting Period	*Incidents*	*Non-Permanent Injuries*	*Permanent Injuries*	*Fatalities*
10-year average	3,200	32	11	2.1
FY25	3,128	30	3	2

Breakdown of Fuels Incident Types FY25

Incident Type	*Incidents*	*Non-Permanent Injuries*	*Permanent Injuries*	*Fatalities*
Pipeline Strikes	1,924	0	0	0
Non-Pipeline Strikes	1,204	30	3	2

Non-Pipeline Strikes Incidents per 100 authorized Fuel facilities and sites in Ontario

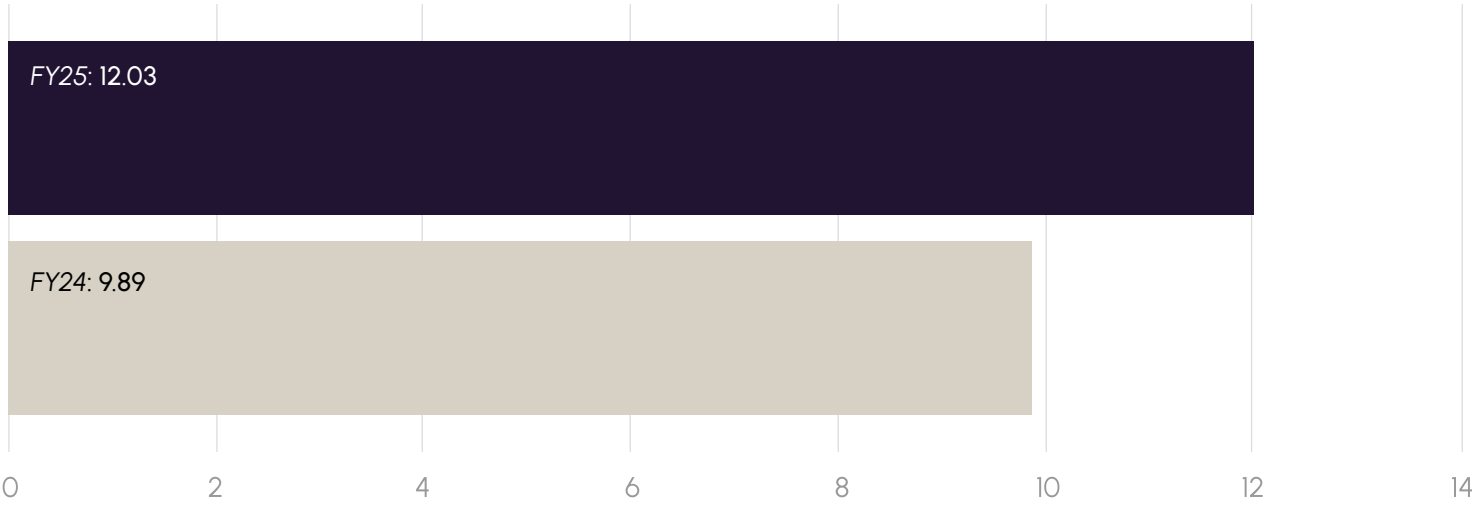
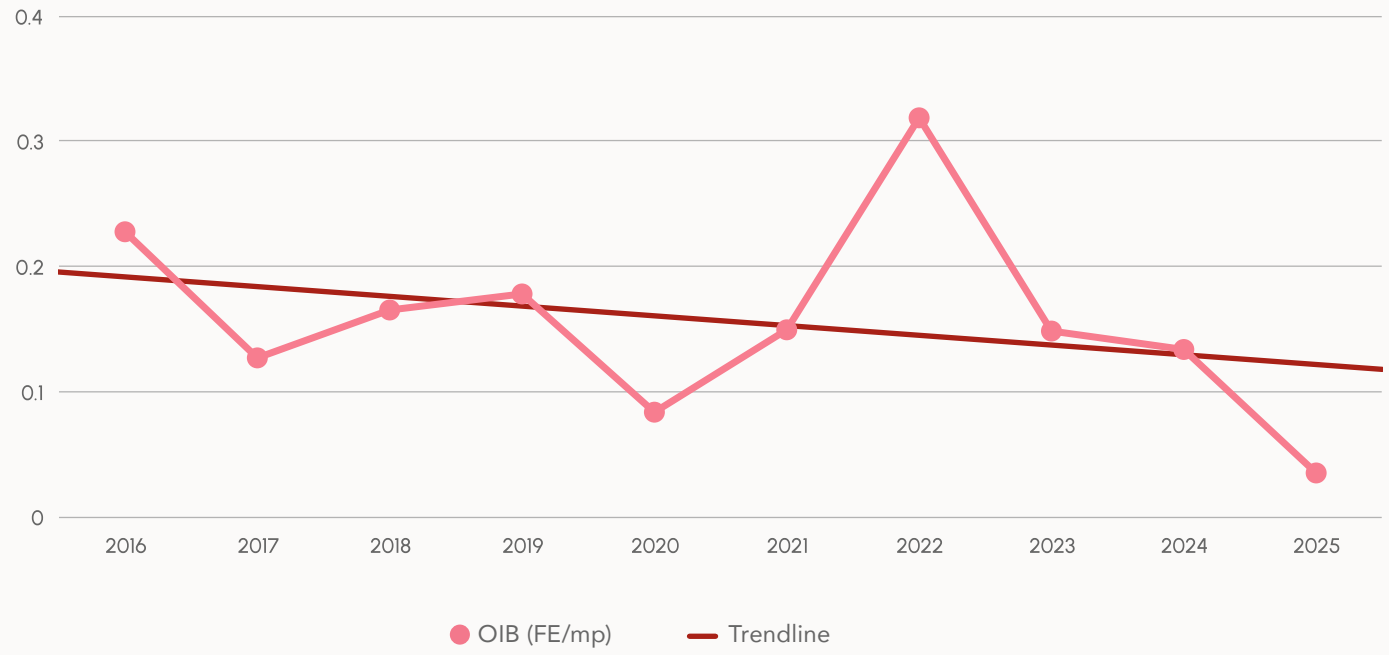
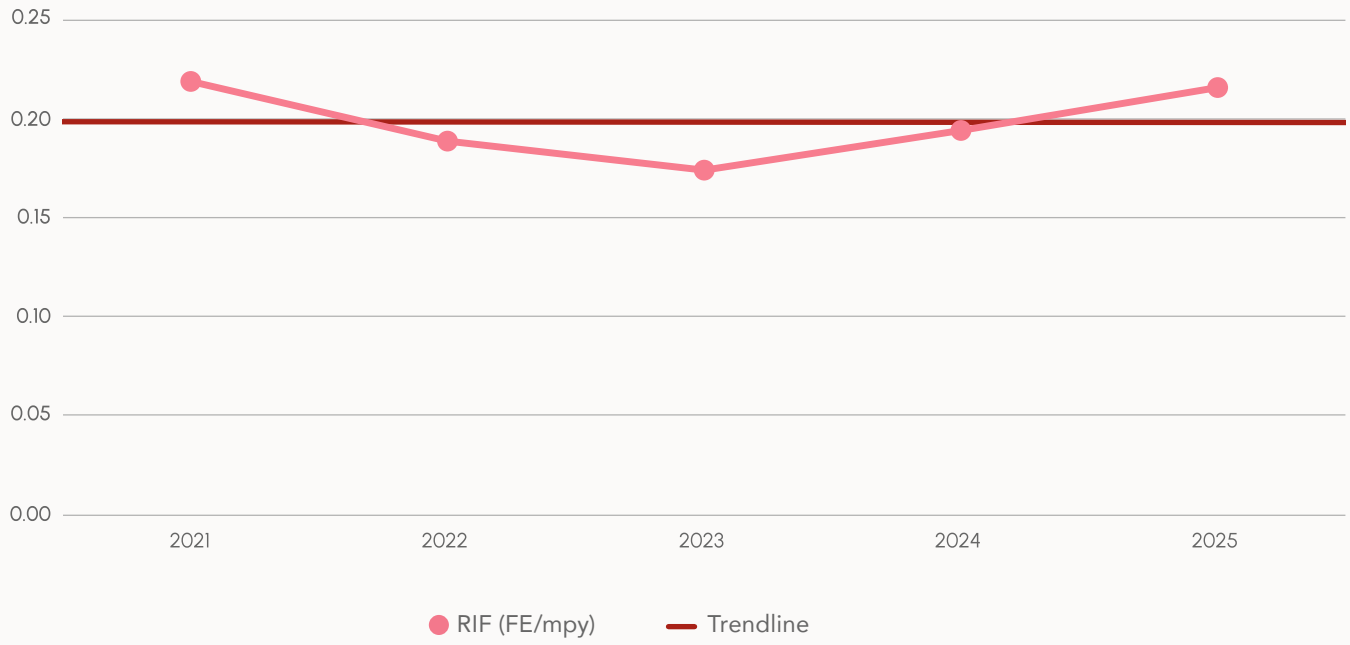


Figure F1: 10-Year Observed Injury Burden Trend for Fuels in Ontario



The OIB has fluctuated in the past 10 years, with the peak occurring in FY22 due to the high number of fatalities. However, we have seen a 72.7% decrease in permanent injuries this year compared to the 10-year average.

Figure F2: Risk of Injury or Fatality for Fuels (2021-2025)



TSSA's RIF estimates the potential for injury or fatality by performing a Monte Carlo simulation on 10-year historical data. In FY25, it calculated that the RIF in fuels was 0.21 FE/mpy (Fatality Equivalent per million people per year).

Inspection Results

TSSA conducts a variety of inspection types including periodic and non-periodic inspections every year.

Liquid Fuels

TSSA conducts periodic inspections of liquid fuel storage and dispensing facilities once every three years. During these inspection the facility will be evaluated against adopted liquid fuels code and any non-compliance will be cited as orders. Figure F3 below is breakdown of the results of periodic inspections at liquid fuels storage and dispensing facilities conducted in FY25.

In FY25, 1,283 periodic inspections were conducted, with 632 compliant and 622 failed, along with 29 classified as "Other". This results in a compliance rate of 49%, indicating nearly half the facilities have had recorded high-risk observations during their periodic inspection.

Figure F3: Periodic Inspection Results

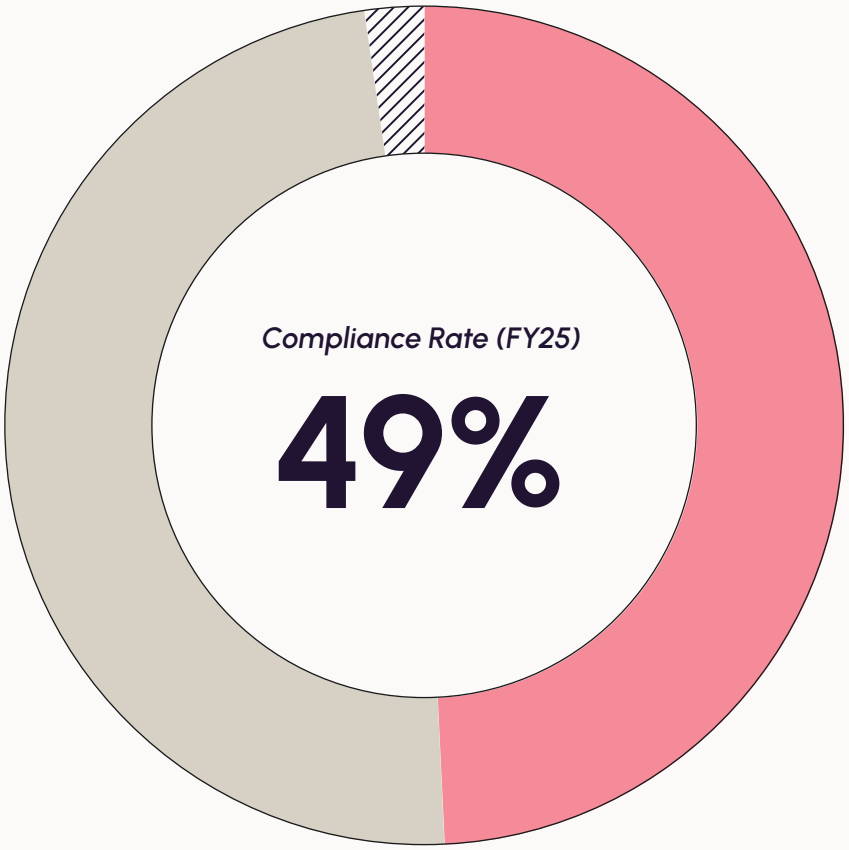


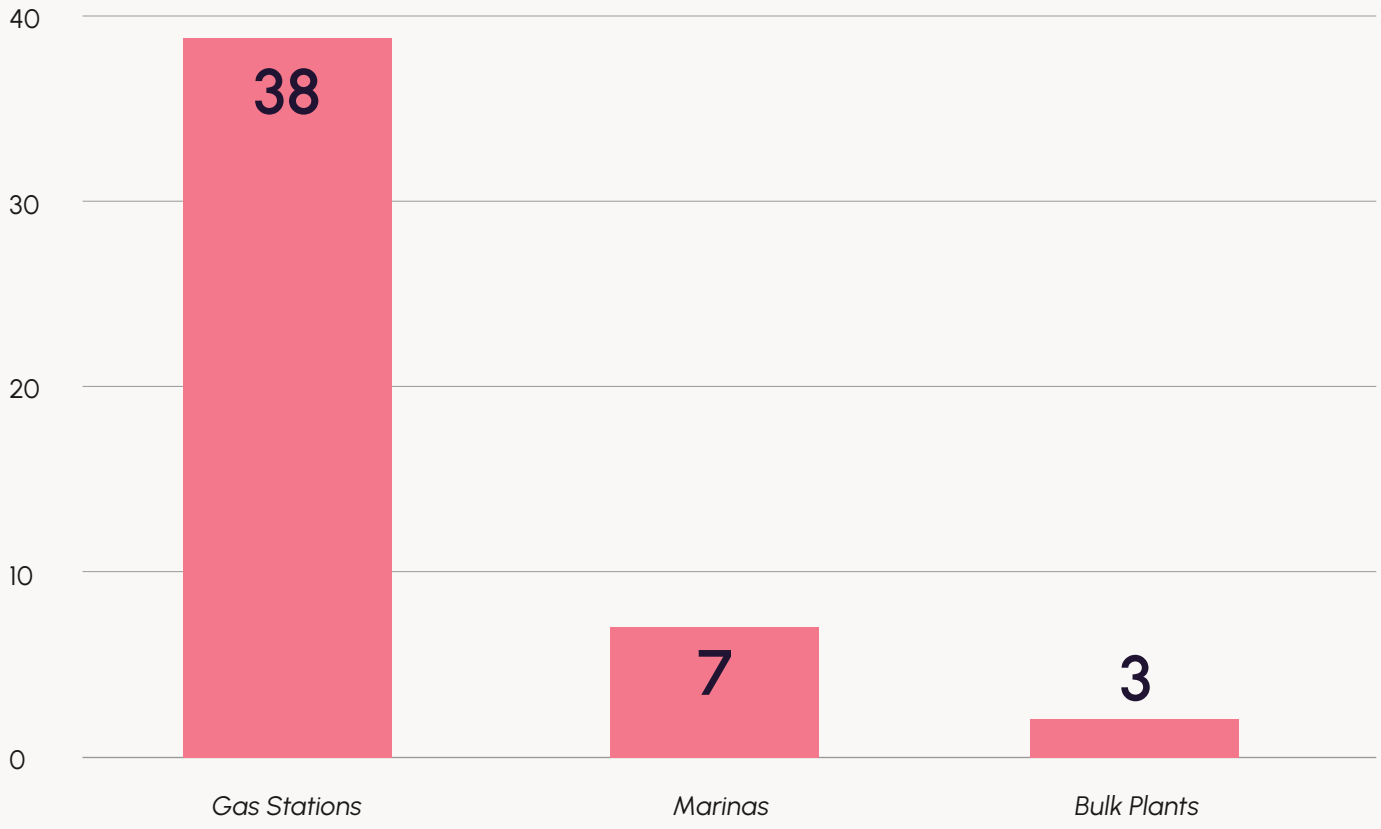
Figure F4: High-risk Licensed Liquid Fuels Sites in FY25

Number of High-risk Liquid Fuel Sites

48 *in FY25, 69 sites in FY24*

Percentage of High-risk Inventory

1.40%



Top High-risk Issues from Periodic Inspections (FY25)

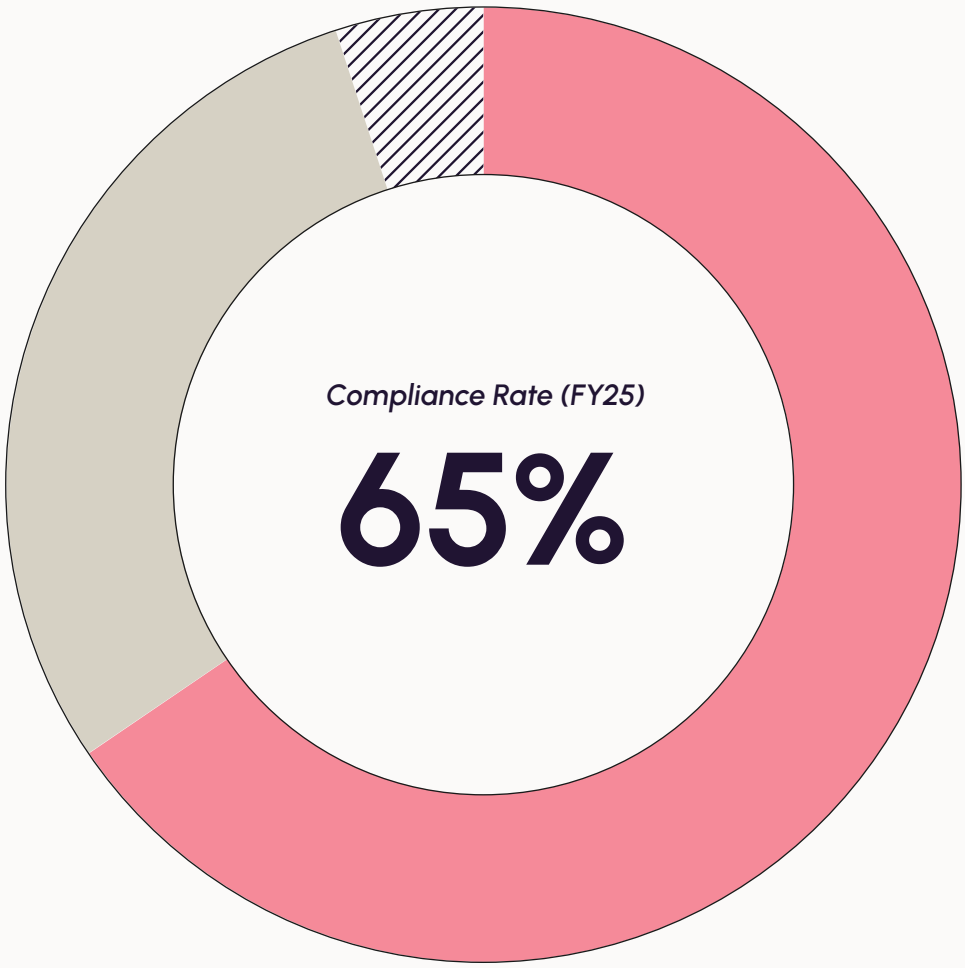
Compliance Issue	*Total number of orders issued*
Ensure the employees are trained in equipment use, spill response and emergency response and make records available.	129
Ensure the training records for equipment use, spill response and emergency response are available for viewing.	129
Fire extinguishers not maintained in accordance with the Ontario Fire Code.	104

Propane

TSSA conducts periodic inspections of propane facilities to oversee and manage the state of compliance across all licensed sites in Ontario. Figure F5 below is breakdown of the results of periodic inspections at propane facilities conducted in FY25.

In FY25, a total of 420 Periodic inspections were conducted, with 275 compliant, 124 failed, and 21 categorized as "Other"; with a resulting Compliance rate of 65%.

Figure F5: Periodic Inspection Results



- ***65%*** *Compliance Rate*
- ***30%*** *Fail Rate*
- ***5%*** *Other Rate*

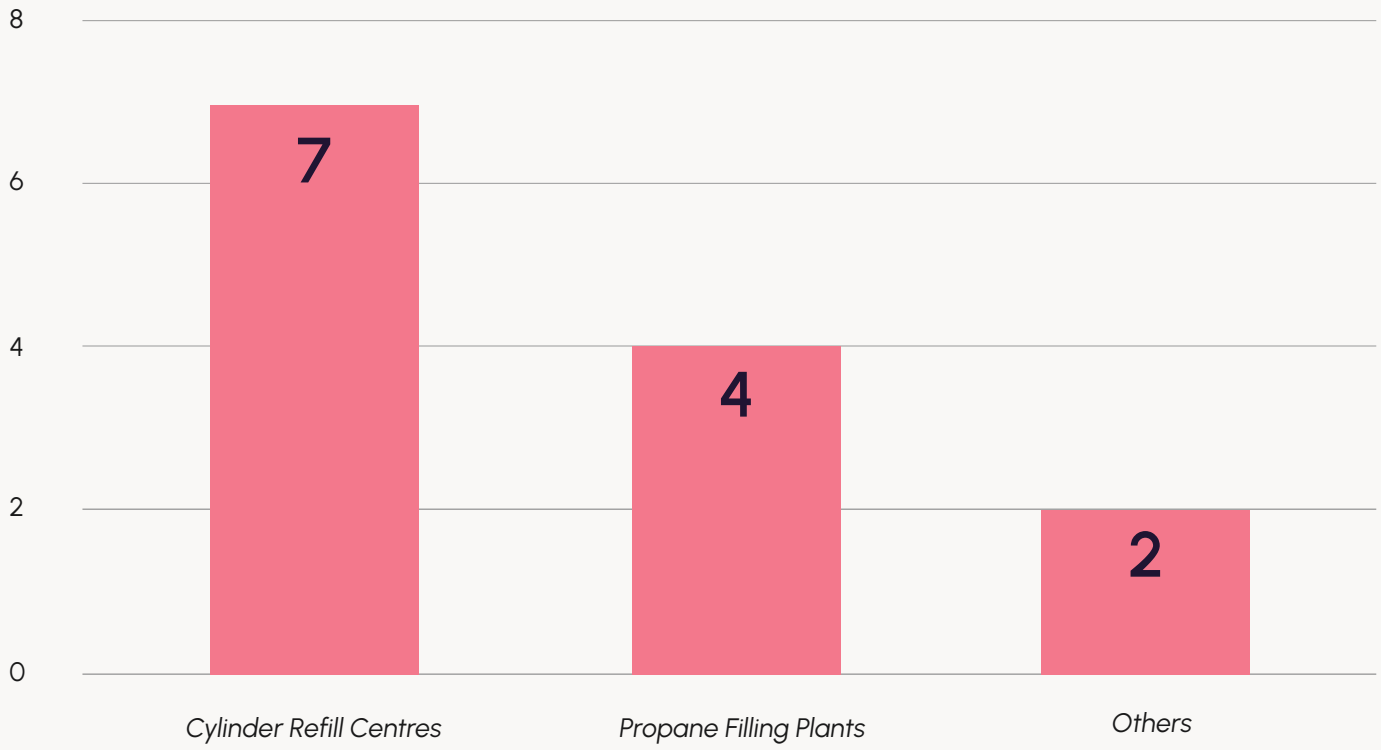
Figure F6: High-risk Licensed Propane Sites in FY25

Number of High-risk Propane Sites

13 *in FY25, 15 devices in FY24*

Percentage of High-risk Inventory

1.25%



Top High-risk Issues from Periodic Inspections (FY25)

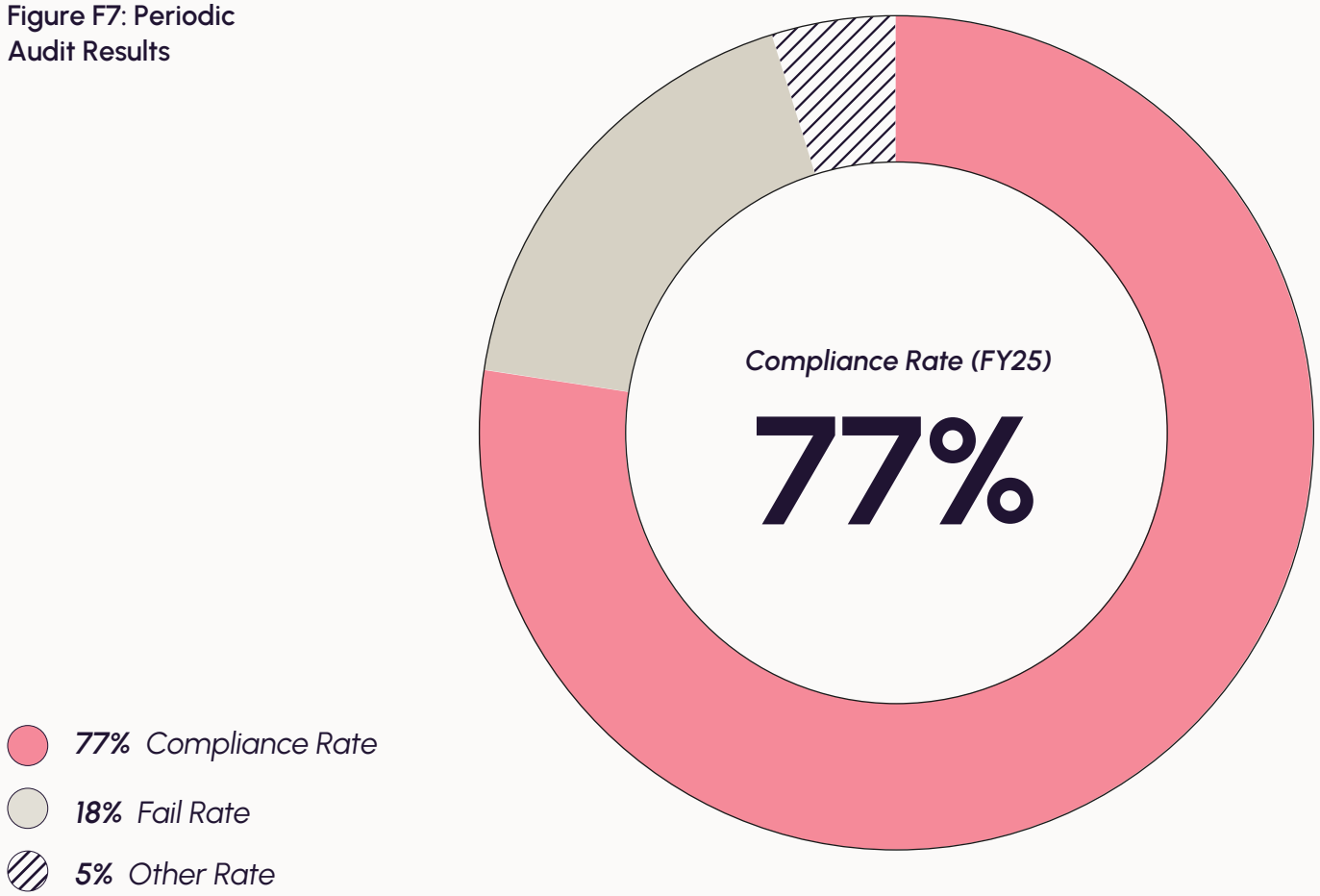
Compliance Issue	*Total number of orders issued*
Failed to provide a recent inspection report from an authorized personnel, done within the last year, confirming the site follows all required safety rules.	77
No proof of training records on employees who are handling propane.	29
No fire extinguisher (portable) is installed/available.	25

Heating Contractors

TSSA conducts periodic audits on heating contractors to monitor their safety and risk management practices. Figure F7 below is breakdown of the results of periodic audits on heating contractors conducted in FY25

In FY25, a total of 2,174 periodic contractor audits were conducted. Of these, 1,684 were compliant, 386 failed, and 104 fell into the "other" category, with a compliance rate of 77%.

Figure F7: Periodic Audit Results



Top High-risk Issues from Periodic Audits of Heating Contractors (FY25)

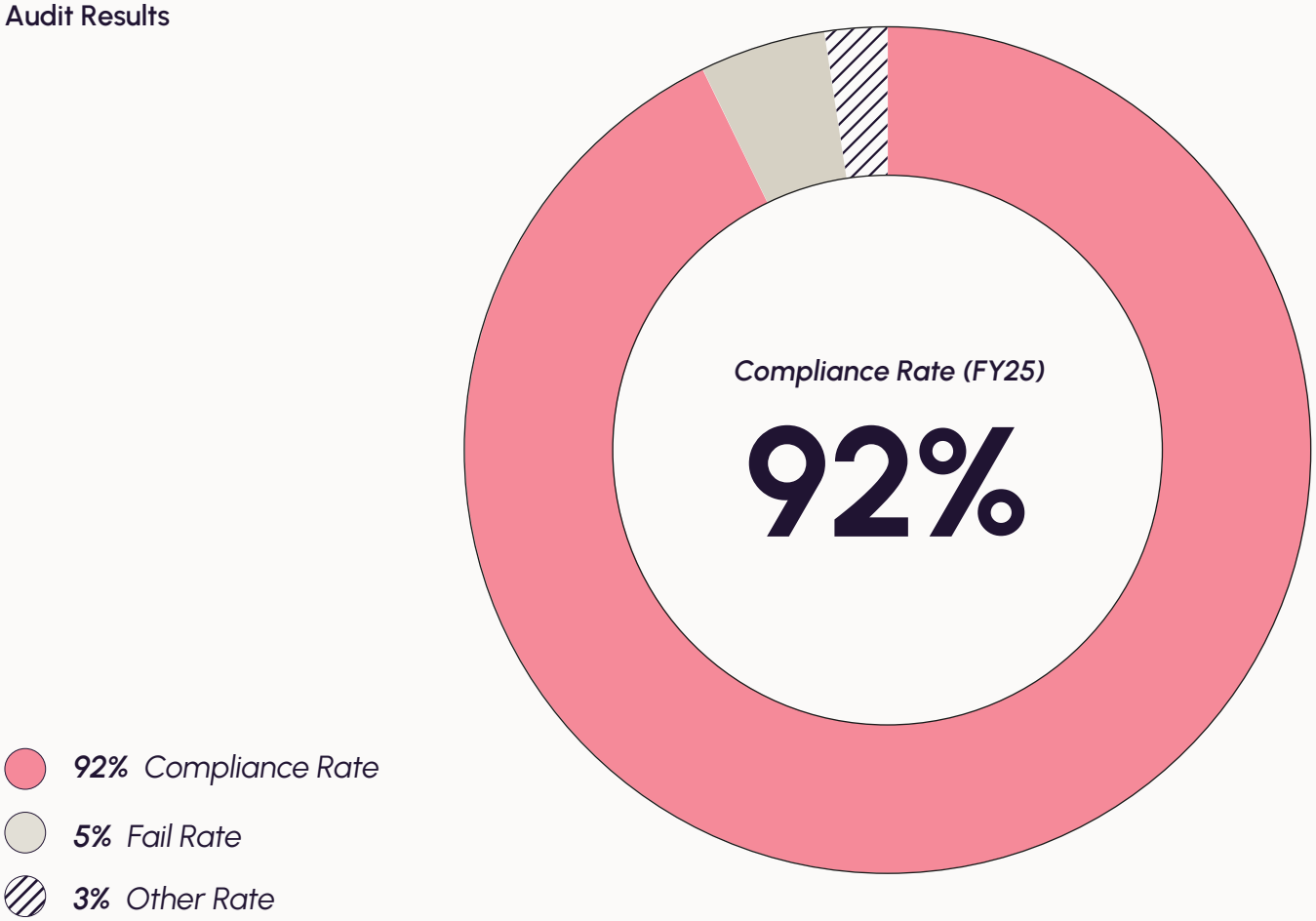
Compliance Issue	*Total number of orders issued*
Ensure that accidents/incidents are promptly reported to TSSA and no one interferes with the scene unless an inspector grant permission.	250
Develop a program to ensure your employees comply with Ontario regulations.	190
Ensure that you employ certificate and/or ROT holders and they promptly report and respond to any unacceptable conditions that pose an immediate hazard.	175

Petroleum Contractors

TSSA conducts periodic audits on petroleum contractors to monitor their safety and risk management practices. Figure F8 below is a breakdown of the results of periodic audits on petroleum contractors conducted in FY25.

In FY25, 83 periodic petroleum audits were conducted. Of these, 77 were compliant, 4 failed, and 2 were marked as "other", resulting in a compliance rate of 92%.

Figure F8: Periodic Audit Results



Top High-risk Issues from Periodic Audits of Petroleum Contractors (FY25)

Compliance Issue	*Total number of orders issued*
Keep at least two fire extinguishers on site	3
Make sure all electrical equipment at the facility is installed and maintained safely	1

Spotlight: Dig Safe to Prevent Fuel-Related Incidents

Stock photo: Excavator digging trench for large pipe

As Ontario's pipeline-safety regulator, TSSA is committed to the goal of ensuring the safety of all oil and gas pipeline infrastructure in the province, including many underground pipeline networks that provide fuel for our homes. With over 110,000 km of pipeline to transport hydrocarbon fuels in Ontario, pipeline strike incidents in the province are one of the most common types of incidents reported to TSSA. On average, about 2,000 such incidents are reported each year. In FY25 alone, TSSA recorded 1,924 pipeline strike incidents.

The majority of incidents are attributed to excavation activities taking place without the proper locate permissions from buried infrastructure owners. The number of pipeline strikes reported typically increases more than twofold in the spring and summer months from May to October when most outdoor construction projects requiring digging usually take place.

To address this, TSSA formally adopted CSA's Z247 standard (Damage Prevention for the Protection of Underground Infrastructure) into the Code Adoption Document in 2016. Contractors are required to follow all aspects of this document.

Before starting any digging project, homeowners and contractors must contact Ontario One Call to locate underground infrastructure such as gas, hydro, cable, and phone lines. These locates provide essential guidance to help prevent damage to pipelines and other buried services.

TSSA continues to work with safety partners, including the Ontario Regional Common Ground Alliance and Ontario One Call, to promote safe digging practices. Resources such as the Excavation Safety Overview, Frequently Asked Questions and other guidance materials are made available on TSSA.org to support safe excavation.

"While partnership and education play a critical role when it comes to safe excavation practices, enforcement is a necessary tool when the need arises," said Owen Kennedy, Statutory Director of Fuels Safety. "As was one such case in FY25 when we successfully prosecuted an excavator whose safety violation caused multiple gas line breaks and subsequent disruptions to homes and businesses. At times like these enforcement actions are necessary to reinforce that safety is a right not a compromise."

"Unsafe practices can put many people at risk of losing heat, hot water, and the ability to prepare meals. In the most serious cases, it can lead to explosions that cause property damage, injuries, or even loss of life," added Kennedy.

TSSA remains focused on reducing pipeline strikes through a combination of education, enforcement, and collaboration. By promoting stronger awareness and compliance, TSSA is continuing to work with safety partners and industry to help prevent fuel-related incidents across Ontario.

Operating Engineers

TSSA's Operating Engineers Safety Program registers, inspects and regulates plants that power Ontario with electricity, refrigeration, heating and cooling. TSSA is also responsible for the examination and certification of the professionals who manage power plant operations.

TSSA's comprehensive registration, inspection and certification activities ensure that operating engineers and operators have the skills and knowledge to safely manage, operate and maintain boilers, steam turbines and engines, gas compression plants, refrigeration plants, and associated mechanical and electrical systems in power generation, industrial processes and environmental plants.

At a Glance

Compliance Rate FY25

48%

Registered Plants

3,177

Operating Engineers / Certificate Holders

10,883

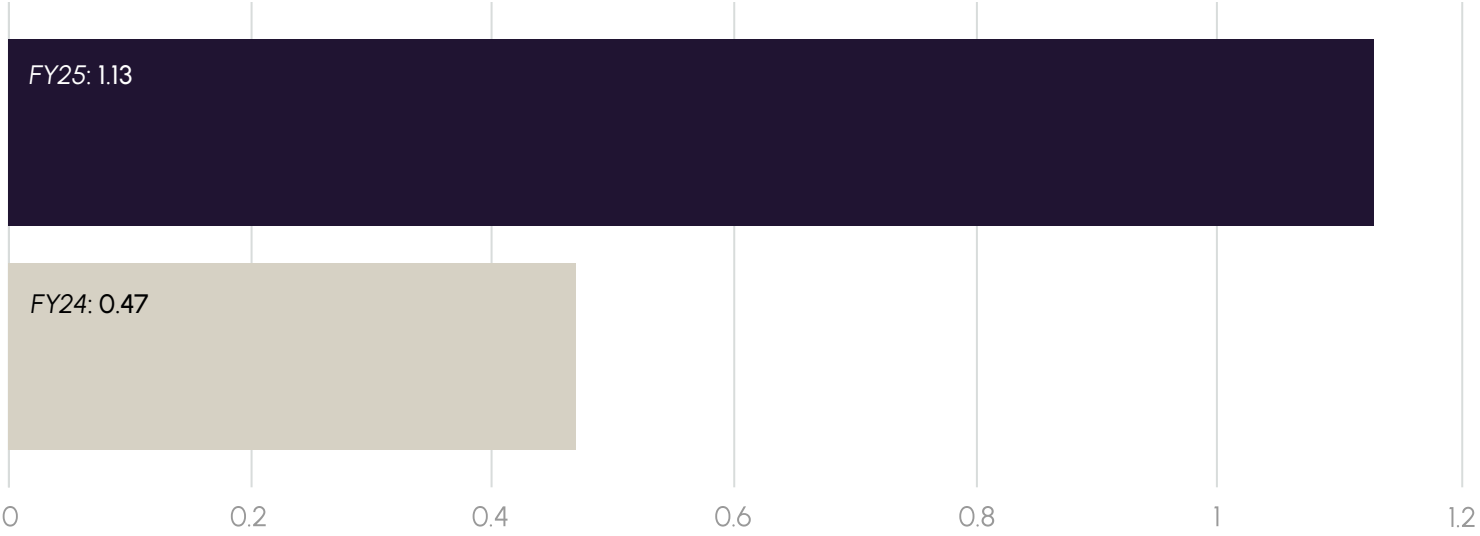
Incidents, Injuries and Fatalities

The total number of reported incidents rose to 36 in FY25, contributing factors may include improved reporting practices and strengthened incident management. Importantly, the number of injuries remains at zero, underscoring continued operational safety.

Incidents

Reporting Period	*Incidents*	*Non-Permanent Injuries*	*Permanent Injuries*	*Fatalities*
10-year average	12	0	0	0
2025	36	0	0	0

Incidents per 100 authorized Operating Plants in Ontario in FY25



The OIB values for the OE program have remained consistently negligible, reflecting the continued absence of injuries. Since there are no recorded injuries in the last 10 years, the RIF is zero.

Inspection Results

TSSA conducts a variety of inspection types including periodic and non-periodic inspections every year. Figure G1 below is a breakdown of the results of periodic inspections conducted in FY25.

In FY25, the Operating Engineers (OE) program completed a total of 1,391 periodic inspections. Of these, 670 were compliant, 627 failed, and 94 were categorized as "Other". This results in a compliance rate of 48%.

Figure G1: Periodic Inspection Results

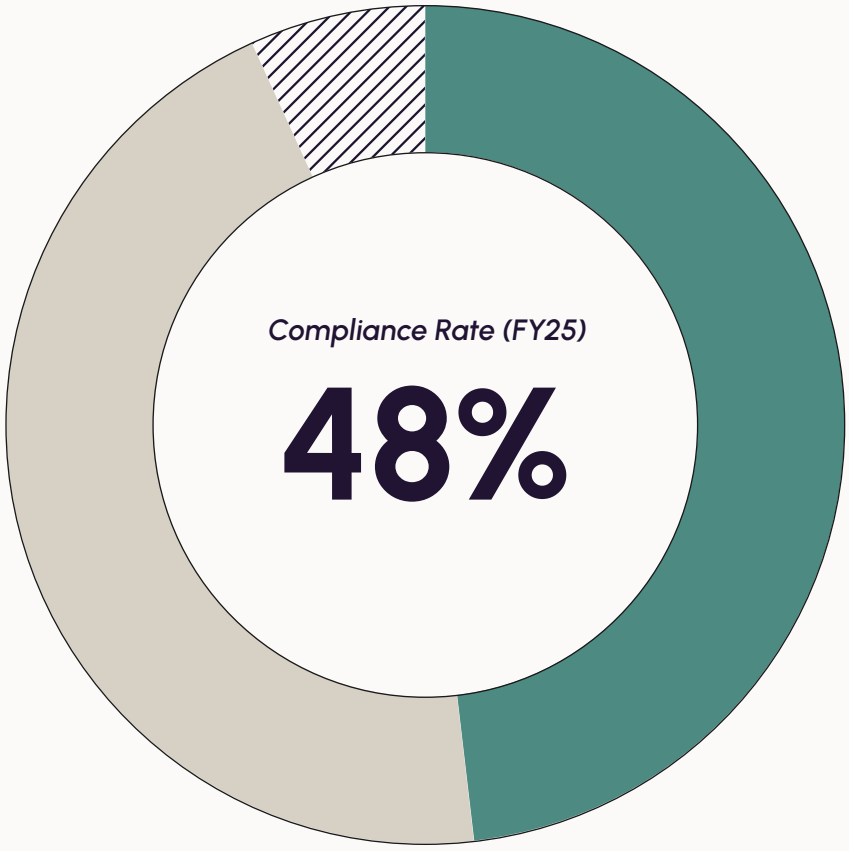


Figure G2: High-risk Operating Plants in FY25

Number of High-risk Operating Plants Sites	*Percentage of High-risk Inventory*
116 *in FY25, 77 devices in FY24*	4.00%

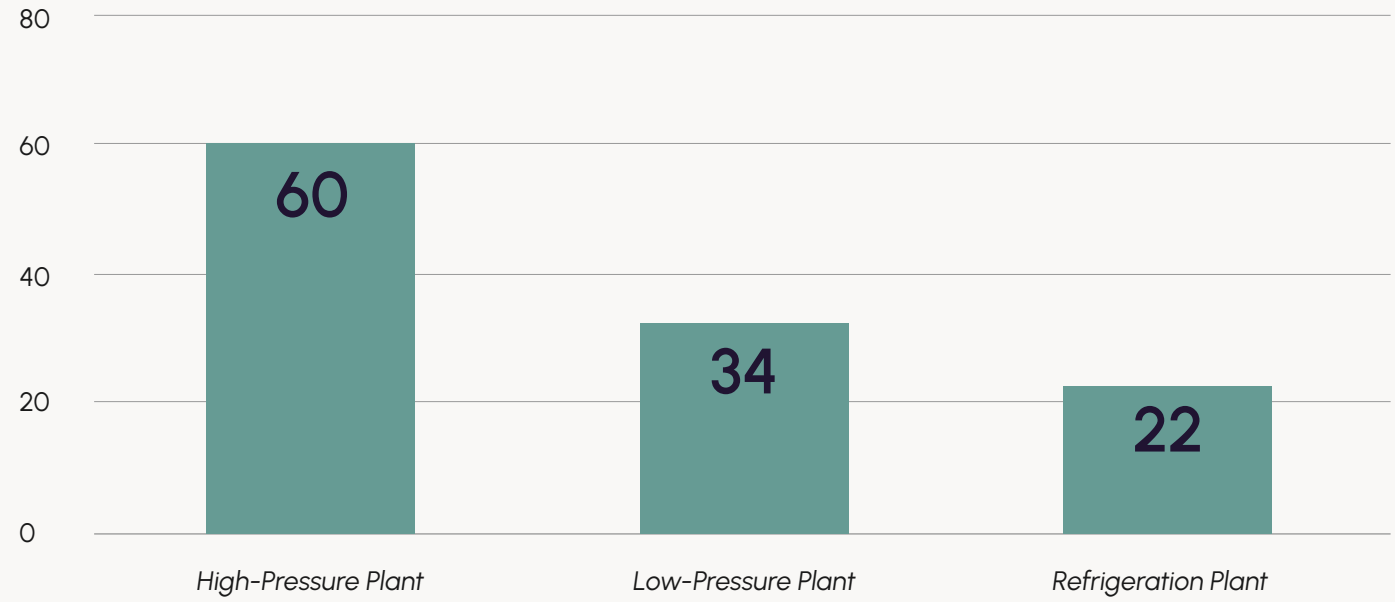
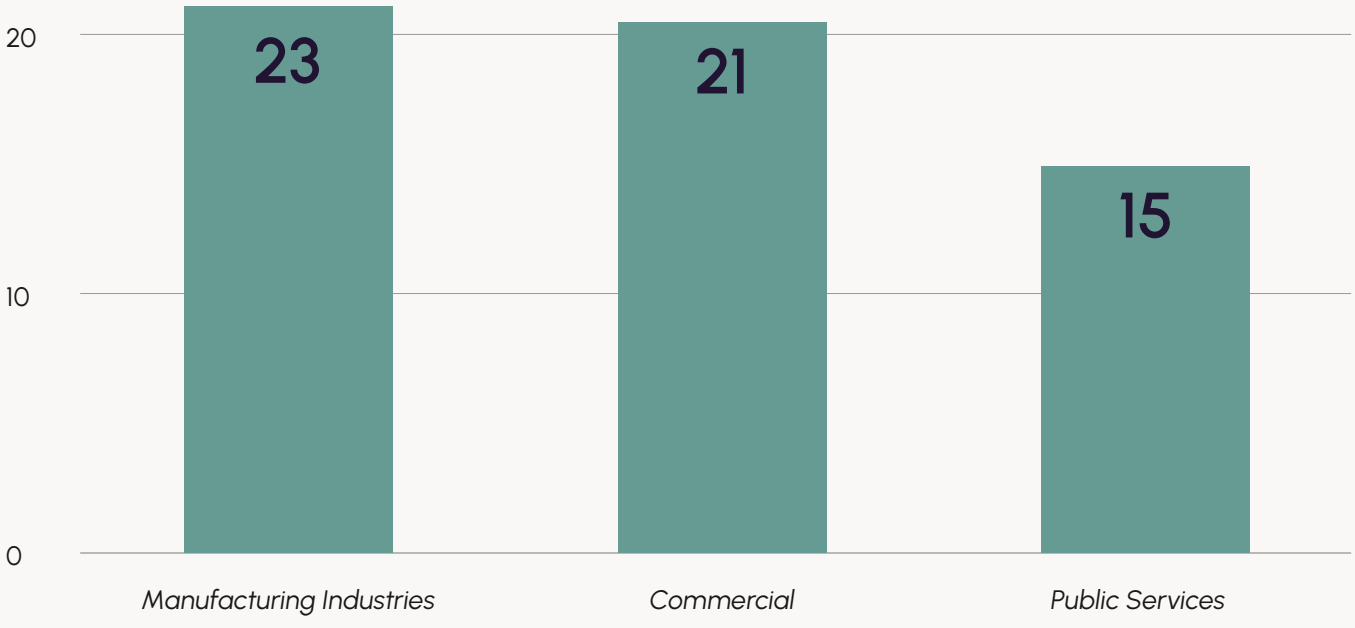


Figure G3: Top 3 High-Risk Plant Function Types FY25



Top High-risk Issues from Periodic Inspections (FY25)

Compliance Issue	*Total number of orders issued*
Safety concerns– Ensuring safety valves and pressure fittings maintenance procedures are developed by trained personnel.	274
Refrigeration plant safety valves over 5 years old not maintained or replaced.	130
Mark valves, piping system and equipment safety devices to ensure safe operation.	110

Spotlight: Ammonia Compressor Room Fire Caused by Poor Housekeeping

Stock photo: Operating engineer in compressor room

In 2025, a fire broke out at a food processing facility in Southern Ontario. The incident occurred in the engine room, which housed ammonia refrigeration compressors critical to the plant's operations. Local fire services responded quickly and extinguished the fire before it could spread further. While no injuries were reported, the fire caused extensive damage to equipment, leaving the room inoperable and requiring a complete rebuild.

TSSA was notified following the incident and launched an investigation to determine whether regulated equipment or operator actions contributed to the fire. Inspectors confirmed that the equipment itself was not the root cause. Instead, the fire was attributed to poor housekeeping practices, specifically, the unsafe storage of flammable materials in a high-risk area. Cardboard had been stored near a junction box containing an electrical hotspot, and this combination of combustible material and an ignition source created the conditions for the fire.

Following the incident, the facility engaged a contractor to safely remove remaining refrigerants from the system and shut down operations in the affected area.

In Safety, Every Decision Counts

"A compressor room is no place for cardboard. Proper housekeeping can make all the difference in preventing fires," said Kim Semper, Director of TSSA's Operating Engineering Safety Program. "Maintaining safe industrial environments depends on all decisions that are made, even something as simple as where to store packaging materials can have important safety implications."

As part of its response, TSSA met with the facility's chief operating engineer to reinforce the importance of safe storage practices and regular hazard assessments and inspections. The facility also organized internal conversations about fire prevention and the need for constant vigilance in identifying and mitigating safety hazards.

"Public safety starts with awareness and accountability," Mr. Semper added. "We all have a role to play in ensuring the spaces where we work are free from unnecessary risk. Education and awareness must be ongoing, and it's better to proactively remind staff of safety protocols as a preventive measure. Fostering a strong safety culture often takes vigilance, continuous education, and open communication to make it work."

Appendix I

List of Acronyms

Code Adoption Document	**CAD**
Carbon Monoxide	**CO**
Disability-Adjusted Life Year	**DALY**
Fatality Equivalent(s)/million people/year (with RIF)	**FE/mpy**
Fatality Equivalent(s)/million people (with OIB)	**FE/mp**
Observed Injury Burden	**OIB**
Risk of Injury or Fatality	**RIF**
Time to Compliance	**TTC**

Appendix II

Glossary of Terms

Authorized Inventory	Authorized Inventory refers to Devices, Facilities, Sites, and Equipments.
Code Adoption Document (CAD)	The default regulatory instrument for mandatory requirements of general application, such as the adoption of codes and standards. This instrument is used to identify and communicate changes to TSSA-specific requirements.
Director's Order	A regulatory decision made by a Statutory Director under the powers given to him/her as per the Act. **Director's Order, Limited Use (s. 27)** Places limits on the operation of a thing that is found to be defective or to not comply with the conditions of its authorization after the thing is fabricated or installed. *27. A director may,* *(a) establish the limits of operation and use of things that are found to be defective or do not conform with its authorization after fabrication or installation;* *(b) permit the operation and use of such thing within such limits as are prescribed, or if there are no such limits, as the director considers safe.* **Director's Order, Public Safety (s. 31)** Used only where there is or may be a demonstrable threat to public safety and the subject matter has not otherwise been provided for in the Act or its associated regulations. It can require regulation, use or disuse of specified things. *31. In cases where there is or may be a demonstrable threat to public safety, a director may make an order with respect to the following matters if they have not otherwise been provided for in this Act, the regulations or a Minister's order:* *1. Requiring and establishing the form and location of notices, markings or other forms of identification to be used in conjunction with equipment or other things that are prescribed.* *2. Regulating, governing and providing for the authorization of the design, fabrication, processing, handling, installation, operation, access, use, repair, maintenance, inspection, location, construction, removing, alteration, service, testing, filling, replacement, blocking, dismantling, destruction, removal from service and transportation of any thing, whether new or used, or a part of a thing and any equipment or attachment used in connection with it.*

Glossary of Terms Continued

Disability-Adjusted Life Year (DALY)	A DALY of 1.0 is the loss of one year of healthy life of a single person due to an injury. Please see Appendix M for a full description. **Injury Burden** Quantified health impact determined by integrating injuries and fatalities observed across the population exposed to TSSA-regulated devices/technologies over a period of time. The DALY metric is used to combine injuries and fatalities into a single metric. The injury burden is expressed in the units of fatality-equivalents per exposed population (in millions) per year. Refer to Appendix M for additional details.
Fatality-Equivalent (FE)	A unit of measure obtained by integrating quantified health impacts into a single count of equivalent fatalities for benchmarking and decision-making purposes. Injury burden and Risk of Injury or Fatality are expressed in terms of Fatality-Equivalents (FEs). Fatality-equivalent/million people/year (FE/mpy) is a unit of measure obtained by integrating quantified health impacts into a single count of equivalent fatalities for benchmarking and decision-making purposes. Refer to Appendix M for additional details.
Fiscal Year	Represents TSSA's fiscal year (May 1 – April 30), e.g., 2025 represents fiscal year 2025 (May 1, 2024 – April 30, 2025)
Health Impact	Refers qualitatively to injuries or fatalities sustained by the public exposed to TSSA-regulated devices/technologies. A health impact could be one of fatal, permanent or non-permanent injuries. **Permanent Injury** An injury sustained by an individual that partially or totally impairs the normal abilities of that individual for the rest of his/her expected remaining life. **Non-Permanent Injury** The consequence of an incident occurrence wherein there was an observed health impact that was estimated to be non-permanent based on the nature of the injury and its associated severity using a methodology developed by the World Health Organization (WHO). A non-permanent injury has no significant impact on the individual's life expectancy at the time of injury.
Inspection	An official examination of a device, system or procedure conducted by an inspector under the Act in accordance with Section 17 of the Act.

Glossary of Terms Continued

Inspection Order	The authority to issue an order comes from Section 21 of the Act and is served by an inspector to one who contravenes and/or who corrects a contravention to the Act or its associated regulations. Under this section, an inspector may also seal anything with respect to amusement devices, boilers and pressure vessels, elevating devices, fuels, and operating engineers, as referred to in the regulations. Where there is or may be a demonstrable threat to public safety, whether or not the thing is subject to an authorization, an inspection order includes the specific nature of identified contravention, the conditions and actions to be taken to correct the contravention and the allowable time to comply for each identified contravention. Orders can be classified into high-, medium-, and low-risk categories, which statutory directors can define to suit the needs of their program area. With the exception of Operating Engineers, the classifications are defined below. **High-Risk Inspection Order** Issued where noncompliance is identified and warrants an inspection order for immediate action within 0 to 14 days, for time to compliance to regulatory requirements. **Medium- and Low- Risk Issues – Safety Tasks** Issued where noncompliance is identified and warrants an inspection order for action within 90 days, for time to compliance to regulatory requirements.
Occurrence	The realization of a hazard which results in, or has the potential to result in, a consequence to people or property. **Incident** An occurrence involving a system/device/component/tradesperson under TSSA's jurisdiction, whereby a hazard is exposed resulting in a consequence to people or property. **Near-Miss** An occurrence involving a system/device/component/tradesperson under TSSA's jurisdiction, whereby a hazard is exposed demonstrating an instance of elevated exposure to risk, while in this particular instance resulting in no consequence to people or property.
Periodic Inspection	An inspection conducted at such intervals as may be determined by the statutory director, risk-based scheduling (where applicable), or required by code or regulation for the purpose of ensuring the safe operation of the device/facility.
Risk	The combination of the probability of occurrence of harm from a thing or a class of things under Section 2 of the Act and the severity of that harm.

Glossary of Terms Continued

Risk of Injury or Fatality (RIF)	The injury burden predicted using a simulation model to combine the probability of occurrence of harm (estimated as occurrence rates) to someone interacting or exposed to TSSA-regulated devices/technologies and severity of that harm. The Risk of Injury or Fatality (RIF) metric is expressed in fatality-equivalents per exposed population (expressed in millions) per year (FE/mpy). This measure of risk accounts for historical occurrences while taking into consideration the uncertainties and variability inherent in the involved parameters such as the occurrence rate, number of victims, age of each victim and types of injuries sustained. Refer to Appendix M for additional details.
Monte Carlo Simulation	A Monte Carlo simulation is used to model the probability of different outcomes in a process that cannot easily be predicted due to the intervention of random variables. It is a technique used to understand the impact of risk and uncertainty. Reference : J.E Gentle. "Computational Statistics." In International Encyclopedia of education, third edition (2010): 93-97
Observed Injury Burden (OIB)	The Observed Injury Burden (OIB) is reported based on fatalities and the severity of injuries experienced during incidents in that year. It is the measure in fatality equivalent (FE) observed each year and normalized by the population of Ontario (FE/mp).
Time to Compliance (TTC)	The time required for a client to have the work completed as specified in a TSSA inspector's order due to a deficiency found during an inspection. Also known as time to comply.
Trend	A statistically representative measure for the noticeable tendency or movement toward, or in, a particular direction over a measured period of time (e.g. positive trend, negative trend and no significant quarterly trend). Refer to Appendix M for additional details.

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