

SAFETY ON THE LINES

The aim is to eliminate the risk of electric shocks at worksites.

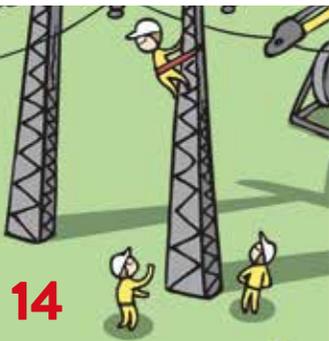


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In an energised environment, each work phase should be planned and checked in advance.



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Intervening in unsafe activity is caring

IN 2025, the proactive safety work at Fingrid worksites was commendable: safety toolbox talks, safety observations and work risk assessments reinforced a common safety culture.

The number of safety observations has tripled in three years, and the number of safety toolbox talks is increasing every year. Around 1,700 safety observations were made at Fingrid's sites, and around 2,300 safety toolbox talks were held in 2025.

The work has been fruitful – the LTIF for the whole year was 2.9, and the intermediate target was met. Nonetheless, there were too many near misses and accidents involving electricity, and we observed serious risk-taking when working at height. It is a compelling message: no amount of time, cost or habit justifies shortcuts in safety.

The 2026 occupational safety theme is clear. Intervening in unsafe activity is caring. It means a licence and a duty to stop, put things right, and learn every day, on every worksite.

We focus in particular on electrical safety and working at height. These risks demand discipline, knowledge and foresight: clear work phases and electrical safety processes, planning for fall protection and lifting, and open reporting of every observation and near miss.

Our target for 2026 is zero serious incidents. As a milestone, we will keep the LTIF below five – one step at a time towards zero accidents. This can only be done together, with everyone taking responsibility, leading by example, and being bold enough to intervene.

Intervening is not nagging. It is caring for your colleagues.

“Intervening is not nagging. It is caring for your colleagues.”



Timo Kiiveri
Executive Vice President
Fingrid

FINGRID

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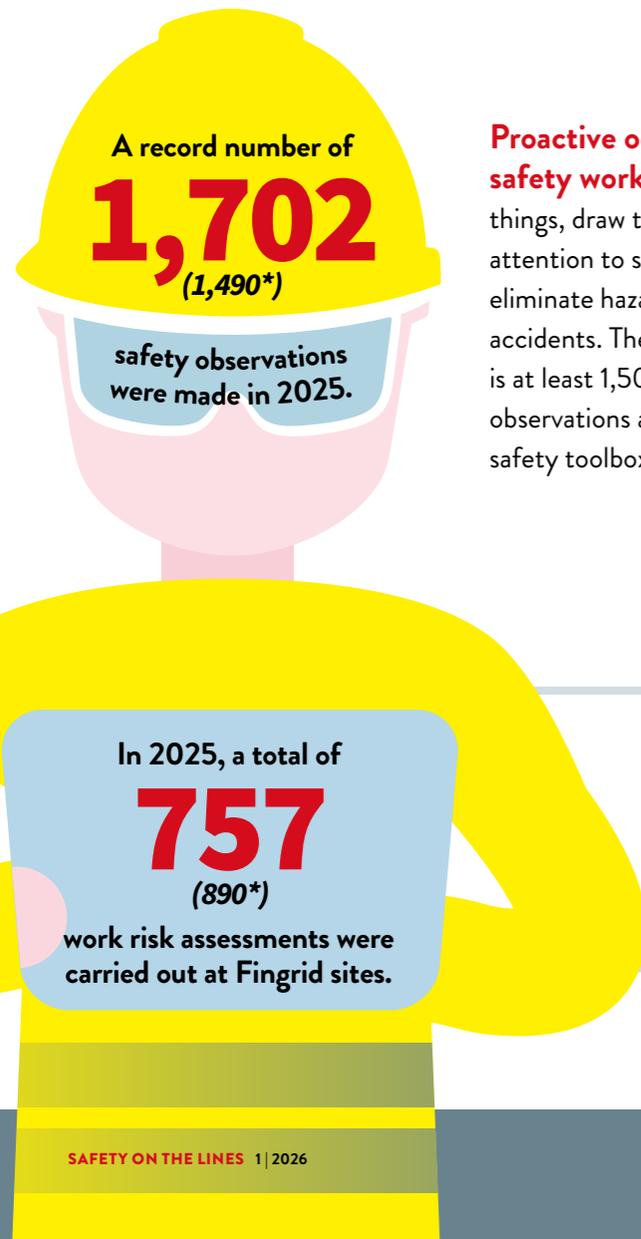
CONTACT US! Occupational safety is a shared issue that we aim to develop in collaboration with our suppliers. All feedback is important. Contact Karri Koskinen with tips for articles, development ideas, and feedback on the magazine. Do not hesitate to contact us if you have any questions about occupational safety. Karri Koskinen, Occupational Safety and Health Manager / Senior Expert, tel. +358 40 631 2152, karri.koskinen@fingrid.fi



Occupational safety in 2025

Fingrid's combined lost-time injury frequency fell to a record low in 2025, and we reached our target easily. The number of workplace accidents resulting in absence almost halved compared to the previous year. In addition, the number of serious accidents fell sharply. Unfortunately, there were far too many serious near misses. Proactive occupational safety work was done on Fingrid's sites. In 2025, the number of hours worked by suppliers fell slightly compared to the previous year.

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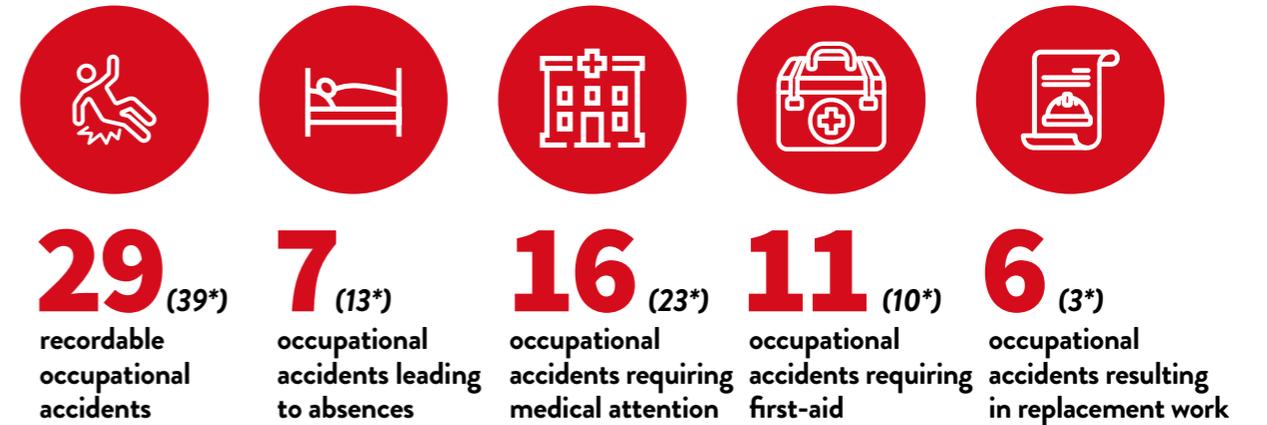
Proactive occupational safety work can, among other things, draw the personnel's attention to safety issues, eliminate hazards and prevent accidents. The goal for 2026 is at least 1,500 safety observations and 2,000 safety toolbox talks.



In 2025, there were a total of **1,421** (1,577*) **866** (1,044*) person-years of service providers' work **555** (533*) person-years of Fingrid employees' work

* 2024 figures in parentheses.

In 2025, there were a total of



A large proportion of workplace accidents leading to absences occurred in transmission line and substation projects. These accidents included bruises, a knife slip, and a fall from a height of about one metre. Exceptionally, slipping only caused one workplace accident resulting in absence. One (4*) of the workplace accidents were classified as severe.

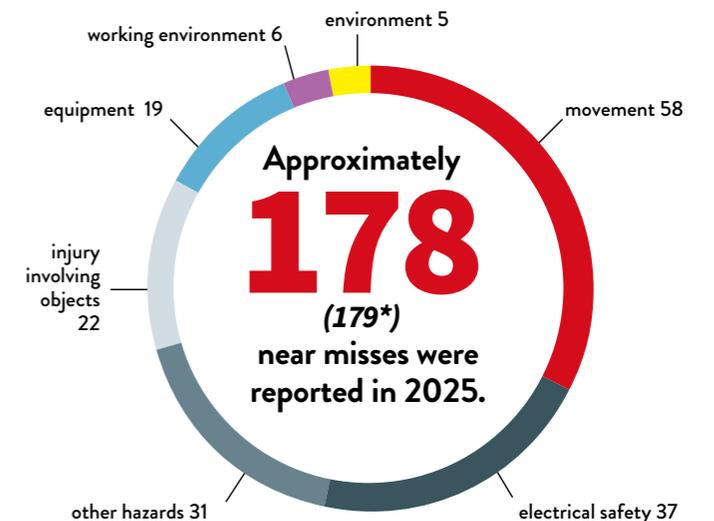
The combined lost-time injury frequency in 2025 was

2.9 (4.8*)

The combined lost-time injury frequency includes the hours worked by Fingrid's personnel and service providers and the occupational accidents resulting in absences. The goal for 2025 was to get below five, and the actual lost-time injury frequency was 2.9. We are heading in the right direction and are on the way to zero accidents. The intermediate target for 2026 for the lost time injury frequency remains below five.



A total of 178 (179*) near misses were reported in 2025. Of these, 18 were classified under the most severe class A, which is an exceptionally high number. Serious near misses included electrical safety, working at height and driving. Electrical safety and movement account for many of the near misses in many years.



ZERO ELECTRICAL SHOCK RISKS

Every day, work takes place in an energised environment at the Tihenniemi substation extension. Safety cannot be compromised, as an electric shock always poses a significant risk.

TEXT SUSANNA CYGNEL | PHOTOS JANNE KURONEN

The mechanical work for the expansion of the Tihenniemi substation will be carried out while the substation is energised. Worksite safety is based on professionals understanding the risks. The photo shows Matias Autiola, Installation Technician and Foreman at Jartop Sähkö Oy.

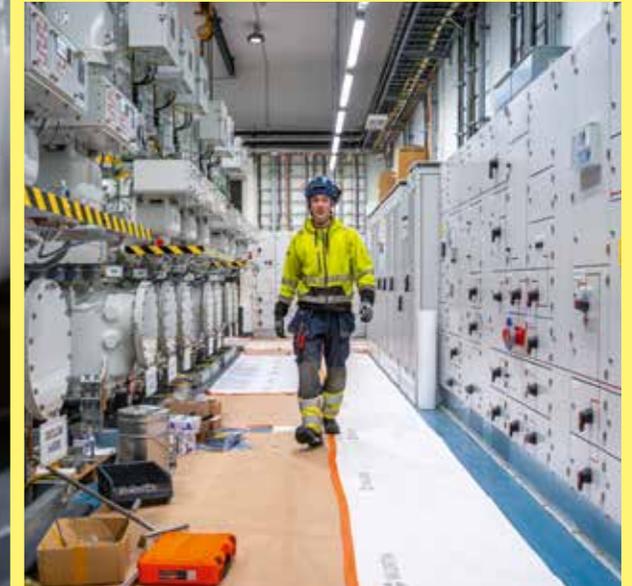


“On the construction site, every cable must be treated as if it is energised, and attention must not be distracted for a moment.”

Heikki Pietikäinen, Site Manager, VEO



Tihisenniemi substation is being expanded while it remains in operation. Work is done in live environments at key nodes, and even moving around the construction site requires special caution. Installation Technician and Foreman Matias Autiola (top right) and Installation Technician Johannes Aitto-Oja (bottom) from Jartop Sähkö Oy.



For ingrid’s Tihisenniemi substation in Kajaani is currently undergoing a major expansion while the station remains in full operation.

“The power is on, so we must be careful at all times. On the construction site, every cable must be treated as if it is energised, and attention must not be distracted for a moment,” says Site Manager **Heikki Pietikäinen** from VEO.

Substations cannot always be taken out of service completely during construction and extension work, and especially at key nodes in the electricity network, work has to be carried out in a live environment.

Therefore, the mechanical works on the Tihisenniemi substation extension will be carried out while the station is energised, and the actual outage will only take place in the spring before commissioning.

“Worksite safety is based on professionals understanding the risks. There is no room for

assumptions in a live environment, and every step of the work is planned and checked in advance,” says **Jari Heinonen**, Project Manager from VEO.

Even just moving around an energised construction site requires special attention. Cables must never be stepped on, access routes are clearly defined in advance, and separate work surfaces are built in the cable cellars.

DAILY SAFETY TOOLBOX TALKS TO REVIEW THE RISKS

Routines can turn into risks, which is why daily safety toolbox talks are held at the Tihisenniemi worksite. They review the specificities of the live station and ensure that the dangers are not forgotten.

“We need to talk about safe working practices every day,” Pietikäinen stresses.

The orientation for new employees includes a detailed safety briefing, and each employee signs to acknowledge they have understood the instructions.

The key risks at the Tihisenniemi worksite and ways to manage them have been compiled in





“After each electric shock, the worker must be escorted to a health centre.”

Jani Pelvo, Head of Electrical Installation Operations, Fingrid

which were electric shocks, compared to only one in the previous year. Seven of last year’s electric shocks occurred during measurement work.

“Workers have not always taken into account where the protection of the installation is adequate and where it is not. The use of incorrect measuring heads and inadequate tools have also caused incidents,” says **Jani Pelvo**, person in charge of operation of electrical installations at Fingrid.

Last year, there were also four near misses related to additional earthing. According to Pelvo, one typical mistake is careless tightening of the current path connector of an auxiliary or additional earthing device.

The danger posed by low voltage should not be underestimated, Pelvo reminds.

“A low-voltage electric shock is dangerous to humans and can cause ventricular fibrillation if the current passes through the heart, for example from one hand to the other. After each electric shock, the worker must be escorted to a health centre.”

BETTER JOB PLANNING AND MORE PRECISE WORK INSTRUCTIONS

In 2026, Fingrid worksites will focus particularly on improving electrical safety, which is reflected in the content of training courses, for example.

According to Pelvo, construction sites need more detailed plans for the work phases. For more hazardous work, such as measurements in live

a single folder, and each worker must be familiar with the contents of the folder before starting work.

“The most important thing is that the instructions are understood and not just acknowledged as read.”

There are several subcontractors working on the Tihiseniemi substation extension site, and they also need to understand the risks of a live site.

“It must be made clear to everyone that all cables are energised by default, unless proven otherwise,” Pietikäinen stresses.

ELECTRIC SHOCKS INCREASED AT FINGRID SITES

Although safety practices at the Tihiseniemi site are stricter than average and accidents have been avoided, the overall situation at Fingrid worksites is clearly worse: electric shocks have increased over the past year.

In 2025, there were 26 near misses or accidents related to electricity at Fingrid worksites, 11 of

installations, method-specific work instructions are required.

Plans and work instructions should be reviewed by the team just before the start of each individual work phase, and the hazards should be known in advance.

“It should not be up to the worker to decide how to manage risks or what tools to use. The work instructions must clearly state what protective equipment and tools are required for the job and, for example, what type of measuring wires are used in different situations.”

Pietikäinen also stresses the importance of site tidiness. It is easier to identify energised structures and high-risk areas in a tidy workplace than in a cluttered environment.

“Tools should not be left lying on top of instruments. Any extra rubbish or dropped tools increase the risk of electric shocks.” ♦



Excavation in the vicinity of live underground cables



EXCAVATION work is one of the riskiest work phases on substation sites.

All cables in the ground are treated as if they are live until it can be established with certainty that they are not.

“A high-voltage underground cable is excavated when it is de-energised and the excavation is supervised by an electrically skilled person. In the immediate vicinity of the cable, digging is done by hand,” explains **Jani Pelvo**, person in charge of operation of electrical installations at Fingrid.

The excavator operator is given precise instructions on where to dig, how deep to go, and whether the cable is de-energised. The location of the cable is marked on the ground using sticks, paint, or other unambiguous markers.

Excavation professionals are not electrically skilled persons, which increases the risk of misunderstandings and incidents.

“There are no common guidelines yet, but the electrical industry is currently preparing a training package aimed at improving the ability of construction workers to work around electrical equipment,” says Pelvo.

Winter further increases the risks of excavation work. Frozen soil can move unpredictably or break up during excavation, damaging cables.

“A damaged underground cable can pose a risk of an electric shock, and a layman would not even notice it,” warns Pelvo.

If an underground cable is suspected to have been damaged during excavation work, always call an electrically skilled person to check the condition of the underground cable before touching or covering it.

“Only an electrically skilled person may repair damaged underground cables. This ensures the safety of personnel and the proper condition of the cable in the future.” ♦

Reserve power plant COMPLETED SAFELY

Hot work, demanding lifting operations, and work on high scaffolding took place during the construction of the Frame 5 extension of the Huutokoski reserve power plant. A safety officer was involved to ensure that precise plans were followed in all situations.

TEXT MATTI VÄLIMÄKI | PHOTO FINGRID

The site in Huutokoski, Joroinen, is now able to provide more rapid disturbance reserves than before, as a new reserve power plant has been built in the area, albeit using old turbines.

The project involved moving two Frame 5 gas turbines from Tahkoluoto in Pori and one from Vaskiluoto in Vaasa, both of which were leased sites, to a site owned by Fingrid. The gas turbines will complement the existing reserve power capacity in the region.

“A new fuel pumping station and turbine hall with auxiliary facilities were also built for the transferred turbines. The turbines were previously located outdoors, so the hall will improve the energy efficiency of the plant and facilitate maintenance,” says **Jarmo Hämäläinen**, Project Manager from Fingrid.

The contract was delivered on a model where Fimpec Engineering Oy managed the project design, procurement and site management centrally. This is known as the Engineering, Procurement and Construction Management (EPCM) model.

The large operation involved several contractors and numerous subcontractors and included lifting heavy objects, installations, and working at height.

THOROUGH PLANS, RISK ANALYSIS AND ORIENTATION FOR A SOLID FOUNDATION

Fimpec appointed Riku Laine as Site Safety Officer, a role focused solely on safety issues, as the title suggests. He worked in collaboration with **Teppo Virtala**, Site Manager at Fimpec.

Laine says that careful preliminary surveys were carried out of the companies on the site. This included checking that employees’ safety, hot work and electrical permits were up to date.

“The workers had already completed Fingrid’s plant orientation online in advance. When they arrived at the site, they were familiarised with the areas, rules

and peculiarities of the site,” says Laine.

The contractors went through the various work phases and conducted risk analyses, which were updated every month during the project and on a case-by-case basis.

The safety officer also carried out regular safety rounds and intervened in any deviations. MVR safety measurements monitored work and machine use, equipment, shelters and safety zones, vehicle and pedestrian routes, order and storage. Employees were also encouraged to actively make safety observations themselves.

“The workers had already completed Fingrid’s plant orientation online in advance.”

Work at Huutokoski started in summer 2024, and the gas turbines were safely commissioned in December 2025.



“It was crucial for safety that the work of all parties involved was well coordinated.”

COORDINATION ONCE A WEEK

Site Manager Virtala says that in just over a year and a half, 464 different people from as many as 153 different companies visited the site.

“It was crucial for safety that the work of all parties involved was well coordinated. We held weekly meetings so that everyone knew what was happening where. Areas were also cordoned off whenever necessary.”

In addition to the heavy lifts, critical work included connecting the new fuel pumping station to the fuel tanks, which also involved hot work.

“The fuel lines were drained and flushed, and then nitrogen was added to make sure they were free of explosive gases,” says Virtala.

ATTITUDE COUNTS

Laine is pleased to see that, especially in larger companies, occupational safety is deeply embedded in the operating culture. The situation may be different for small businesses, for example.

In Huutokoski, two workers were reprimanded when their work on scaffolding did not meet the safety criteria. When the workers did not change their ways, they were removed from the site.

“Even minor incidents of negligence must be addressed. We don’t have a ‘learn from your

mistakes’ mentality when it comes to safety at work,” Laine says.

“Workers were also told to obtain the necessary protective equipment, for example, if there were any shortcomings,” Virtala adds.

Even with the right attitude, equipment and arrangements, it is impossible to plan for everything in advance.

“There were two minor accidents on the site in the last year and a half, both of which were largely caused by ordinary tripping. However, serious damage was avoided,” says Laine.

GOOD PRACTICE

Safety officer Laine also worked with Fingrid’s safety coordinator.

The safety coordinator visited the site regularly to ensure that Fingrid’s quality requirements were being met.

“Having a safety officer on site full-time to promote safety issues proved to be a good practice. We do not have the resources to be on site all the time,” Hämäläinen says.

Work at Huutokoski started in summer 2024, and the gas turbines were safely commissioned in December 2025. ♦

Intervening is caring

Intervening in a co-worker's unsafe activity can prevent an accident or injury at work. Intervention in a constructive spirit demonstrates caring.

TEXT MINNA SAANO | PHOTO FINGRID

This year, Fingrid's theme for occupational safety on construction sites is 'Intervening in unsafe activities is caring.'

"The theme arose due to accidents and near misses in the past year. Particular attention is now being paid to electrical safety and working at height," says **Markku Pöysti**, Expert in Occupational Safety at Fingrid.

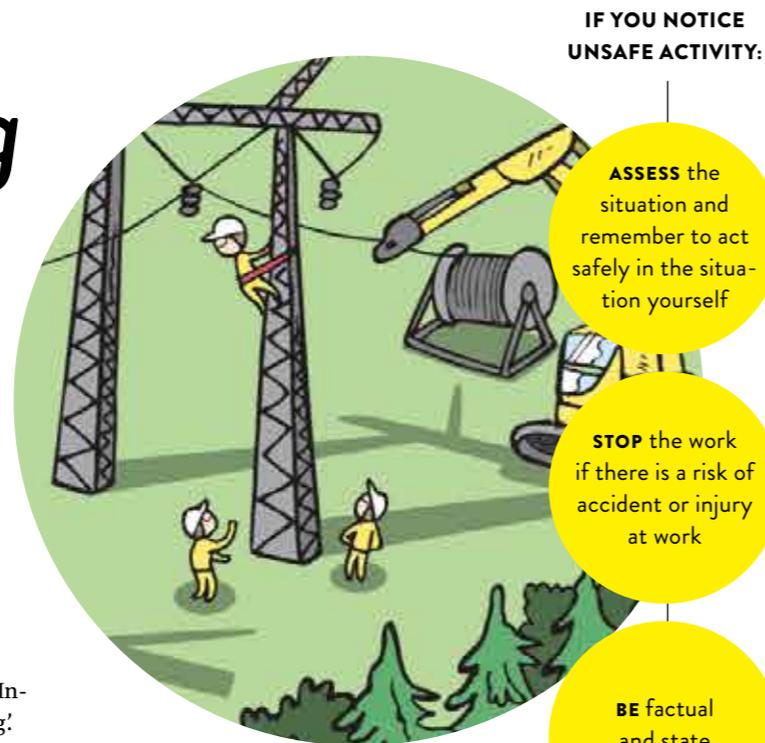
An activity is unsafe if it could result in injury or cause damage to property, material, the environment or third parties.

"Acting unsafely can be due to ignorance or incompetence. Sometimes it is a lack of attention to instructions and risks, sometimes it is forgetfulness in the rush of daily work," says Pöysti.

When a colleague points out that your harness is not fastened or your safety goggles are missing, it shows that they care. The recipient should understand the value of the feedback and not perceive it as a negative comment. Intervening means caring and wanting to protect your colleague from harm and damage.

Pöysti understands that there is a big threshold to speak up.

"It is largely a question of how to say it constructively. It is important to be calm, create a sense of caring, and make your colleague understand the risks that their actions or omissions may pose to themselves or others."



IF YOU NOTICE UNSAFE ACTIVITY:

ASSESS the situation and remember to act safely in the situation yourself

STOP the work if there is a risk of accident or injury at work

BE factual and state the risks

TRY to find solutions to prevent unsafe behaviour

CONTACT the site manager if necessary

RECORD a safety observation of the situation

LEARNING OPPORTUNITIES

Eelis Lassi, Site Manager at Enersense PN Oy, says that from the outset of a new project, a safety culture is created on site where anyone can intervene in unsafe activities, whether they are a colleague or a supervisor.

"This culture is created first and foremost through safety toolbox talks, where employees discuss the risks associated with their jobs and think about ways to prevent them."

When pointing out unsafe behaviour to a colleague, it is important to address the issue in a way that makes the colleague understand that the intervention is directed at the activity, not at the person.

"If the approach is wrong, the situation leaves a bad taste. Unsafe behaviour must be addressed and corrected immediately. When the intervention feels positive, the atmosphere is then open, and the situation becomes a learning experience, not a judgmental one."

Taking care of safety goes beyond avoiding accidents and injuries.

"Safe operations lay the foundation for a high-quality end result," says Lassi. ♦

A PRACTICAL QUESTION



What are the responsibilities of the employer and the employee in vehicle safety?

Employers and employees have their own responsibilities when it comes to safe driving. However, the most important thing in traffic is restraint and the right speed for the conditions, says **Juha Merjama**, CEO of Tapaturva Oy.

TEXT MARJO TIIRIKKA

1 How can an employer ensure safe driving?

The employer is responsible for the equipment and for ensuring that employees have the right skills required to operate it. The employer must also ensure that employees' driving licences are in order.

Regular checks also encourage drivers to drive more carefully in their leisure time.

No matter how good a driver you are, if you are angry or in the mood for a race, it cancels out everything good that you have learned. The right speed for the conditions and mood management are the key to safe driving.

2 How can an employee influence vehicle safety?

The employee is responsible for their own skills, car maintenance and driving safety.

It is good to understand that, for example, the driving posture used to be taught wrongly.

The driver's chest should be 30-40 centimetres from the wheel. In addition, the driver needs to sit firmly on the seat, so that they can quickly swerve from one lane to another in an emergency.

You should allow enough time for driving and aim, for example, to always be at least fifteen minutes early.



"The right speed for the conditions and mood management are the key to safe driving."

3 What to pay attention to regarding equipment condition and choice of tyres?

The employer is responsible for maintaining its own equipment. All cranes, including small ones, require regular inspections. It would also be a good idea to appoint a person responsible for each device.

You should choose good quality tyres. From time to time, it is also a good idea to check whether your tyres are wearing unevenly. The tyres in the best condition should always be put on the rear axle.

Tyres also need to be changed at the right time. For example, winter tyres do not have rain grooves, which makes it easy for the car to begin hydroplaning or slipping in slush. ♦

Scan the QR code to make a safety or security observation!

Every observation counts!

Make a safety observation

Safety observations provide information on safety measures and hidden risks, so we can intervene before an incident arises. Safety observations can also be made on positive things. To make an observation without credentials, go to www.fingrid.fi/havainto or use the QR code below.



Make a security observation

Let us know if you notice anything out of the ordinary. Observations can be on big or small things. In addition, all cases of theft, vandalism, violence and threats must be reported using the security observation form. To make an observation without credentials, use the QR code below.




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