

Introduction

One of the central questions in the fight against climate change is the following: How can the climate reversal be achieved in the transportation sector? And it is clear: The railroad is part of the solution.

Currently, about 10 % of all emissions come from the transportation sector. Shifting freight traffic to the rails is the fastest and most direct way to combat emissions and climate pollution.

In doing so, the Rail Cargo Group cuts down on several million tonnes of CO_2 -eq per year with its transportation services internationally – in Austria alone, more than 1 million tonnes of CO_2 -eq are saved every year.

Rail freight transport produces many times fewer emissions than road transport – while greenhouse gas emissions from the transport sector continue to rise, we are continuously improving our carbon footprint.

Transporting goods on rails has everything going for it, because the railway is the most climate-friendly mode of transportation and is the key to fulfilling the EU's climate goals. So every additional kilometer and tonne of cargo transported by rail is good for the environment. And without freight transport, reaching the climate protection goals will not be possible.

The ÖBB Group lives sustainability – the key to longlasting business success. As the freight transport subsidiary of ÖBB, the Rail Cargo Group has its own ambitious sustainability measures in addition to the group-wide climate protection strategy and continuously strives to improve.

This white paper is dedicated to these measures for sustainable rail freight transport.

Because a green future is a future on the rail.



The sustainable rail compared to the road

6 -times lower energy consumption

with high performance. We transport heavy loads by rail with our national and international transports while consuming considerably less energy than by road.



rail

6 -times lower external costs

The proven safety systems on the railways significantly reduce external costs for protecting against noise, climate change, pollution and accidents. These even drop ninefold if first mile and last mile rail services are taken into account (Europe).

3 -times lower noise emissions

Rail freight transport generates only one-third of the noise generated by freight transport. We are equipping all of the freight wagons currently in operation with new, quiet brake blocks, thereby reducing noise emissions by a further half.





8 -times lower air pollution

Transportation by rail significantly reduces exhaust emissions from motor vehicles, which pollute the ambient air primarily with nitrogen oxides, non-methane volatile organic compounds (NMVOC), soot, and other particles.

"The railway is the only means to reconcile climate goals with economic and consequently transportation growth."

On an international level

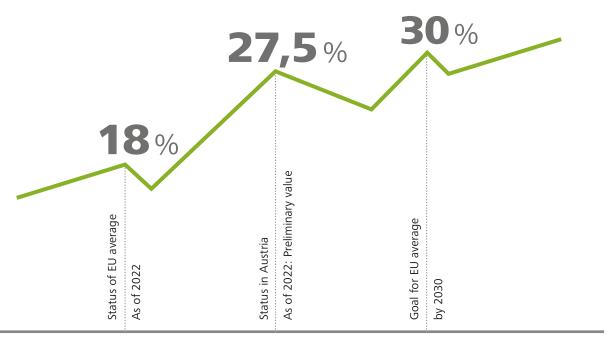
As a founding member of the initiative **Rail Freight Forward**, a coalition of European freight railroad companies, we have set ourselves the goal of shifting the growing volume of freight traffic from road to rail and increasing the **modal share of rail freight transport in Europe to 30** % by 2030. This would avoid 25 million tonnes of CO₂ emissions and about 25 billion Euros in external costs from 2030.

Our stated goal is to shift more freight traffic onto the rails. The railway is the only means to reconcile climate goals with economic and consequently transportation growth.

In Austria, we are frontrunners with a modal share of 27.5 %*, but in Europe, we have an average of around 18 %.

However, **freight transport primarily takes place internationally**, which is why we also advocate at a European level for raising the modal share to at least the Austrian level of around 30 %.

It's up to all of us – rail transport companies, infrastructure managers, and politicians throughout Europe – to make the modal shift a reality.



Source: Rail Freight Forward (Europe-wide numbers)

^{*} Preliminary value based on available data.

And we're going one step further. Quiet Tracks Initiative

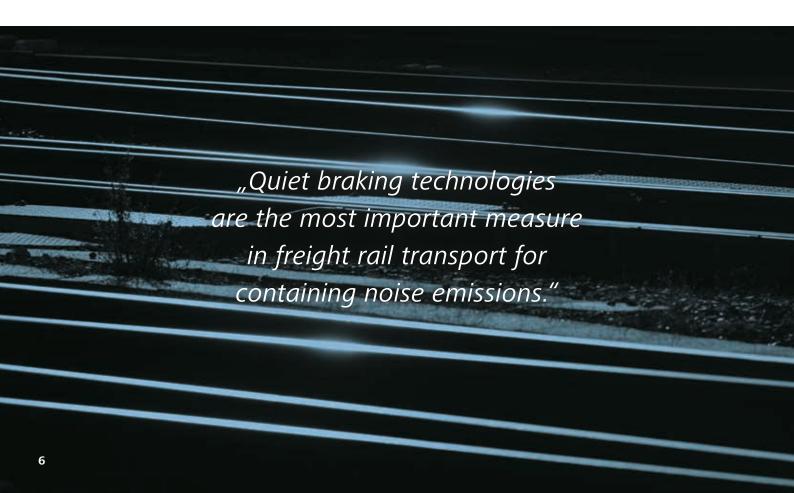
Quiet braking technologies are the most important measure in freight rail transport for containing noise emissions: In this way, we can combat noises right at their source. We are thus equipping all of the freight wagons currently in operation with new, quiet soles. This whisper brake has plastic or ceramic brake pads and reduces the wagons' rolling noise by about 10 dB. That corresponds to halving the noise.

The new brake pads do not roughen the running surfaces of the wheels, which means that the rail surface does not roughen either. Both components – running surface and rail – remain smooth and thus quiet. In this way, we protect nearby residents and other affected parties from disturbances. By the end of 2023, more than 99 % of the entire fleet has been equipped with quiet brakes, meaning that it already met the legal guidelines that came into force in 2024.

Energy-efficient Driving

On train journeys, energy savings of up to 10 % can be achieved through appropriate driving and special vehicle technology. Our locomotive drivers are instructed on this during their training and are also regularly trained in practice during rides or on driving simulators.

Digital driving assistance systems support the locomotive drivers in lowering energy consumption during a train journey. **The winner: the environment.**



100 % Green Traction Current

Rail freight transport is one of the most sustainable land transport options. The emissions savings made possible every day thanks to environmentally friendly rail transport services contribute considerably to that.

Every time goods travel by train rather than by truck, large amounts of emissions are saved.

In addition, we invest in the clean origin of traction current with a traction current mix primarily from hydropower, wind power and photovoltaics. Since 2018, the power for our freight trains in Austria comes entirely from renewable sources – since 2019 also the three-phase current for operational facilities such as buildings, workshops or point heating systems.

Further, in Austria, we can offer transports for which upstream emissions are offset by climate protection projects. Reliable with safety and good for the environment.

Warehouse Locations with Financial Climate Contribution

Our warehouse locations Vienna Freudenau and Lenzing in Austria are operated with financial climate contribution.

We record greenhouse gas emissions here, reduce them continuously and offset unavoidable emissions together with ClimatePartner through climate protection projects. With the financial climate contribution of the Lenzing warehouse location, we support wind energy projects in

Bandırma, Turkey. For the Vienna Freudenau warehouse, we invest in regional projects in the Karwendel nature park in Austria.

Additionally, we support a certified forest-protection project in Brazil. **The offsetting processes of ClimatePartner are audited annually by TÜV-Austria.**





Waste Management

The railway is particularly well-suited for waste types such as excavated materials, construction and demolition waste, household waste, and ash and slag.

Since 2023, waste transportation in Austria with a total weight of more than ten tonnes and a transport distance of 300 km are required to be transported by rail or via other means of transport with equivalent or lower

pollutant or greenhouse gas potential. Then from 2024, 200 km, and from 2026 waste transport in Austria from a distance of 100 km should take place by rail. We rely on suitable equipment such as MOBILER container bodies and intermodal carrying wagons, 20-foot containers and other conventional wagon types in order to **enable the transfer of waste transport to rail**.

8 million tonnes of waste

transported every year – that's around 11 % of all waste in Austria.





have been saved to date by our waste transport by rail.

300.000

less truck journeys* per year



are needed thanks to rail transport. This means an immediate reduction in ${\rm CO_2}$ and road noise.

* Own calculations based on 2021 RCA waste transport data and assuming a truck loading weight of 24 tonnes.



Emissions Calculation

Every time goods travel by train rather than by truck, large amounts of emissions and energy are saved. EcoTransIT is an internationally recognized tool in the logistics industry for calculating the energy consumption and emissions of any freight transport worldwide. This enables us to share the **contribution each individual transport makes** – the energy needs and the emissions

of each freight shipment – supplemented by shipmentspecific real data.

Additionally, in cooperation with EcoTransIT, we have expanded the basic calculation tool, which uses real production data from transports to retroactively calculate our customers' emissions.

Eco Award

And our customers benefit from this too, because we can calculate the results of a road versus rail comparison for your transports. On our TÜV-approved **Eco Award**, we present emission statements about your transport by rail and CO₂ savings with emission calculations based on EcoTransIT.

Added value to customers

- External assessments and auditing confirm that our calculation process complies with all current standards.
- Companies such as ClimatePartner have signalled that they will recognise the TÜV-approved award and the emissions calculated with EcoTransitIT as the basis for investments in offsetting projects.

Rating Successes

We take our responsibility to people and the environment seriously and always strive to improve. With us, our customers can count on responsible action in harmony with the environment. This is attested to by the certificates and ratings for our measures in the fields of corporate social responsibility and sustainability, such as "Gold" from EcoVadis, "Very Good" in the ESG rating from

imug | rating, a **B** rating in the important CDP rating, and an **B** in the sustainability rating "Rail Sustainability Index" of the International Union of Railways (UIC).

Our ratings results confirm that we are on the right track with our efforts toward a more sustainable world.











