

# Decarbonising the construction industry: hydrogen-powered wheel loader begins practical testing

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- **Hydrogen-powered wheel loader to deliver key insights for the sustainable operation of large construction machinery**
- **Green drivetrain technologies are a central lever in the company's decarbonisation strategy**

Vienna/Gratkorn, 3 November 2025 A hydrogen-powered wheel loader from Liebherr has now gone into operation at the Kanzelstein quarry in Gratkorn. STRABAG will be testing the new machine intensively over a two-year period, running it at least 50 hours per week. Fuels represent STRABAG's largest source of CO<sub>2</sub> emissions – around 40 percent of total Group emissions are attributable to the diesel consumption of its construction machinery, commercial vehicles and passenger cars.

"To become climate neutral by 2040, we need effective solutions – and converting our construction machinery to renewable technologies is an essential lever. We are pursuing our sustainability path consistently, science-based and open to all technologies. The test run of the hydrogen-powered wheel loader is an example of what sustainable operation and the decarbonisation of our large-scale equipment can look like," says STRABAG CEO Stefan Kratochwill.

The coming years will be crucial for the company's transition from fossil to renewable energy sources. In this regard, STRABAG has committed itself to the global [Science Based Targets initiative \(SBTi\)](#). By 2030, the company aims to reduce its Scope 1 and 2 emissions – the greenhouse gases directly within STRABAG's control – by 42 percent. Three central levers have been defined for achieving this goal: the vehicle fleet, the construction machinery, and the asphalt mixing plants.

## In-house filling station to deliver green hydrogen

Converting heavy construction machinery to sustainable drive technologies remains a challenge, as there is still no market-ready solution. The hydrogen engine of the wheel loader represents an important approach with great potential. "Besides its positive impact on climate protection, this technology helps maintain a high level of

value creation and technological expertise in western Europe. It strengthens supply-chain resilience and offers strategic advantages,” explains Dr.-Ing. Herbert Pfab, technical managing director of Liebherr-Werk Bischofshofen GmbH.

For the practical test, a dedicated hydrogen filling station has been set up at the quarry to allow straightforward refuelling of the wheel loader. As a strong regional partner, Energie Steiermark contributes vital local expertise and will ensure the hydrogen supply for the station on site.

According to internal calculations, operating the hydrogen-powered wheel loader will save around 37,500 litres of diesel and cut CO<sub>2</sub> emissions by approximately 100 tonnes per year. The hydrogen engine produces no climate-damaging emissions. To ensure maximum utilisation, the wheel loader will be deployed both in essential quarry operations and at the site’s asphalt mixing plant.

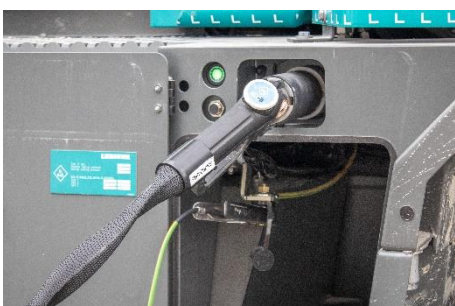
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Our dense network of subsidiaries in various European countries and on other continents extends our area of operation far beyond the borders of Austria and Germany. Working together with strong partners, we are pursuing a clear goal: to design, build and operate construction projects in a way that protects the climate and conserves resources. More information is available [www.strabag.com](http://www.strabag.com).



The hydrogen wheel loader operates in the Gratkorn quarry without any emissions.

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The wheel loader refuels with green hydrogen at the company's own filling station.

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