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## MEVCO EQUIPS RIVIANIANS TO CHARGE INTO MINING



**DEERE**  
TAKES  
THE LEAP  
INTO FULL  
AUTONOMY



# RIVIAN TO GO MINING

**M**any mining companies have set 2050 as the year they will achieve net-zero carbon emissions and declared short-term goals for the interim years, such as a 30% reduction by 2030.

The integration of renewable energy is key to achieving those targets. By all accounts, there is a lot of work to be done. It's estimated that there are nearly 200,000 lightweight utility vehicles working in mines around the world. The clock is ticking. Transitioning light fleet vehicles to electric can be a relatively simple first step toward achieving emission targets, one that can provide time to work on machines directly involved in production.

MEVCO (Mining Electric Vehicle Co.) developed a solution to accelerate the mining journey to electric and decarbonization, and in 2024, it let miners in North American and Australia test drive the result. The experience surprised everyone, said CEO, Founder and Executive Director Matt Cahir. An important part of the solution is the mine-spec all-wheel-drive Rivian R1T.

"When we go to their mine sites, or they come to our drive days, we will often get hardened miners, who 'only drive diesels' behind the wheel of the Rivian, and they walk away seriously impressed," said Cahir. "We recently held a driving day in Perth [Australia] for 28 mining companies. There were guys driving the Rivians that have been mining for 30 years. Then a senior executive for a big mining company got in and started driving. After only five minutes of driving up the track and through water, he stopped the truck. We thought... 'uh-oh.' But then he looked at me and said, 'This is going to fundamentally change light vehicles in mining.' He's a lifelong diesel guy, and he

MEVCO upfits U.S.-built battery-electric pickup to be a mine utility vehicle. By **Chad Elmore**

**Rivian said it made more than 600 internal changes to its latest R1 vehicles, and many of those changes are ideal for mining in surface as well as underground applications.**



was blown away by the Rivian.

"That's the exciting thing about these trucks. Light vehicles can be the catalyst for large-scale transformation."

## A SYSTEMS INTEGRATOR

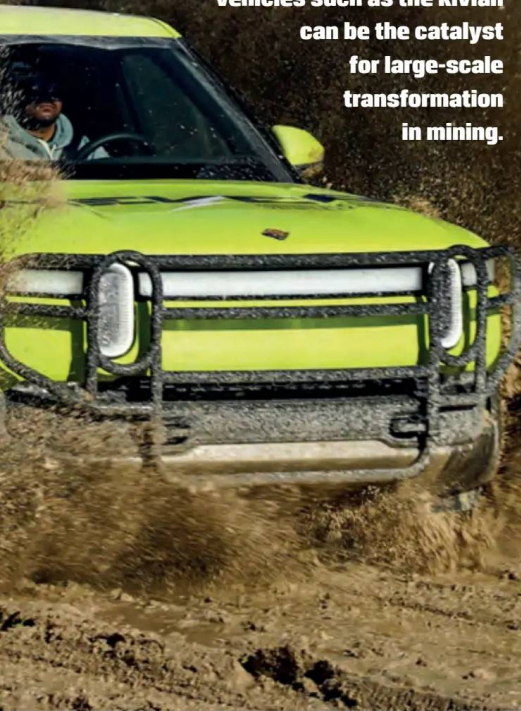
Cahir founded MEVCO in Australia in 2022. It's a portfolio company of Resource Capital Funds (RCF), a private equity firm focused on mining. Through its RCF Innovation fund, the firm invests in mining equipment, technology and service companies with an eye toward safety and sustainability.

MEVCO was created to operate as

a systems integrator, one focused on supplying each of the pieces required for surface and underground mines to successfully and safely add battery-electric utility vehicles to their fleets.

The first piece is the vehicle itself.

"The reason MEVCO exists is because the big automotive OEMs are nowhere near where they need to be to help decarbonize mining," said Cahir. "We searched the world for the best purpose-built electric vehicle that would operate in both underground and surface mines in all sorts of climates — from -50 degrees Fahrenheit all the way to



**MEVCO CEO and Executive Director Matt Cahir said battery-electric utility vehicles such as the Rivian can be the catalyst for large-scale transformation in mining.**

PHOTOS: MEVCO

and HiLux pickups have historically been the most popular mass-produced utility vehicle in mining. MEVCO's first battery-electric utility vehicle was a HiLux WorkMate cab chassis with its turbo-diesel engine removed and an 88-kWh lithium-ion NMC (nickel manganese cobalt) battery in its place. The MEVCO EV 4X4 utility vehicle was introduced in the fall of 2022 and is still available in Australia.

"That truck still works today," said Cahir, "but we learned a lot from it. The market for upfitted machines has matured and no mine wants a product that's not supported by the OEM. The supply chain requirement is a very hard path to follow, as you're literally dealing with thousands of individual pieces. I didn't want MEVCO to be an automotive company."

To that end, Irvine, Calif.-based Rivian Automotive Inc. and MEVCO announced a global partnership to provide battery-electric pickups to the mining industry.

"One of the biggest differences with Rivian from other automotive OEMs is that when we approached them Rivian told us, 'Yes, we can do that. And we're going to engage our engineering teams and our software teams to make it happen.' You don't get that from any other automobile OEM and that's really important.

"We started working with Rivian over a year ago, and we have made tremendous progress in a short amount of time. Both companies have put a lot of people toward the project, and Rivian has been really, really great to work with. Our first prototype, developed with both

engineering teams, was built in their prototype shop."

Extensive testing in Australia as well as at individual mine sites followed to ensure the vehicle met mine-specific safety requirements.

MEVCO's latest mine utility vehicle is based on the second-generation dual

motor R1T that was introduced last year. It is built in Rivian's dedicated factory in Normal, Ill.

Rivian said it made more than 600 internal changes to its latest R1 vehicles, including oil-cooled motors that are engineered and manufactured in-house.

Perhaps the most important thing for mining is the new electrical architecture, which saw a reduction in the number of electronic control units (ECUs) from 17 in the first generation to seven in the latest. By shifting to zonal architecture and increasing the computational capabilities of each ECU, Rivian engineers removed more than 1.6 miles (2.6 km) of wires from each vehicle.

In mining as well as highway driving, fewer parts mean fewer pieces to repair.

Rivian and MEVCO offer two different battery packs. The Max pack uses NCA (nickel cobalt aluminum) chemistry to deliver an estimated range of up to 420 miles, while the new Standard pack uses lithium iron phosphate chemistry (LFP) for up to 258 miles of range in the mining truck.

**MADE IN NORMAL**

R1T trucks destined for work in the mines are completely assembled in Rivian's factory and are then moved to MEVCO's dedicated shop in Normal to get upfitted. "Everything has been thought through in de-contenting the R1T," said Cahir. "We take the carpets out and replace them with rubber mats and then we start the upfitting process. When we ship the vehicle, it's a complete vehicle that's ready to go to work, with everything they need fully integrated."

MEVCO said it is currently focused on supplying Canada, the United States and Australia marketplaces. Models going to Australia will be right-hand drive soon.

The company also supports mines with charging infrastructure, maintenance and workflows. Other elements designed to help meet emissions goals include data-powered insights with MEVConnect, support with charging infrastructure with MEVCO Charging, and ongoing support with MEVCO Support. **PP**

**MEVCO upfits each Rivian for mining applications in Normal, Ill., the same city in which Rivian builds its passenger vehicles and commercial vans.**



+50 degrees Celsius in the Australian Outback. We visited the German manufacturers, and we saw the American manufacturers. We went to everybody looking for the perfect solution for mining and the Rivian fit the bill."

In nearly every mining country but the United States, Toyota Land Cruisers

[mevco.com/rivian-r1t](http://mevco.com/rivian-r1t)