

NEWS RELEASE



Perth, Western Australia – 23 June 2026

BHP, Rio Tinto and Caterpillar launch battery-electric haul truck trial in the Pilbara

BHP, Rio Tinto and Caterpillar have launched a trial of two Cat® 793 XE Early Learner battery-electric haul trucks at a mine-site demonstration in Western Australia's Pilbara as part of an industry-first collaboration.

Following three months of on-site testing at BHP's Jumblebar iron ore mine, the trial is showing meaningful progress and reflects an industry effort to tackle the complex challenge of lowering greenhouse gas emissions across large-scale mining operations.

After extensive safety validation and controlled testing at Caterpillar's Tucson Proving Ground in the United States, the trucks arrived at Jumblebar late last year and are now being put through their paces in one of the world's most demanding mining environments.

The scale and operational intensity of the Pilbara make it an ideal testing ground for the haul trucks, with Jumblebar currently home to two of seven Caterpillar Early Learner battery-electric haul trucks being tested globally.

The trial is generating critical data to assess technical readiness, infrastructure requirements and commercial feasibility, including trialling high-powered static and dynamic charging solutions.

More than 100 hours of operation and over 200 test laps have occurred in early phase testing, with insights helping validate key assumptions around safety, technology and maintenance of the trucks.

The next phase of the trial will evaluate dynamic charging via an innovative energy transfer system that will charge the trucks while in motion. This could be one of the keys to unlocking operational efficiency.

Western Australia Premier Roger Cook and Mines and Petroleum Minister David Michael joined representatives from BHP, Rio Tinto, Caterpillar and WesTrac to see the trucks in operation.

Roger Cook Premier Western Australia said:

"I want Western Australia's economy to remain the strongest in the nation, which is why my government is fully behind BHP and Rio Tinto's efforts to decarbonise and help make WA a renewable energy powerhouse.

"Thanks to Caterpillar, these electric trucks will help deliver my government's vision of reducing emissions in the Pilbara so this region can continue keeping both the WA and national economy strong."

Amber-Jade Sanderson Minister Energy and Decarbonisation said:

"Heavy industry needs to embrace the challenge of lowering their emissions as we work towards decarbonising the Pilbara.

"Our Government's Energy Transition is good for jobs, good for the WA economy and good for the future of this vital region.

"It's great to see mining companies trialling battery-electric haul trucks in the Pilbara – this is an important step towards net-zero."

David Michael, Minister Mines and Petroleum said:

"Congratulations to BHP, Rio Tinto and Caterpillar on the commitment and leadership shown in building these machines.

"These trucks exemplify what can be achieved when leaders in our industry collaborate to find a solution to a complex problem.

"We can't underestimate what a feat it is to have such innovative, cutting-edge technologies rolled out in the Pilbara.

"It is machinery like this that will have a meaningful impact on reducing carbon emissions from mining operations."

Geraldine Slattery, BHP President Australia said:

"Investing in battery-electric haul truck fleet technology and operations in the Pilbara is key to our decarbonisation. This trial is helping to advance the technology we need and improve our understanding of how to scale across our operations, from charging infrastructure and energy management through to how it integrates into safe and productive operations.

"This is exactly why industry collaboration matters. By working together, we can accelerate progress in the technologies enabling electrification, on what is needed in the mining operation, and in the supply chain.

"BHP remains on track to meet our target of at least a 30% reduction to our operational greenhouse gas emissions by FY2030 from FY2020 levels."

Matthew Holcz Rio Tinto Iron Ore Chief Executive said:

"Decarbonising haulage across the Pilbara is a complex challenge that is going to require collaboration across industry to solve.

"This trial will give us real-world data in some of the most demanding operating conditions on earth.

"The Pilbara's scale and intensity are unique, and that's exactly what makes it the right place to test this technology to understand what's needed to support broader deployment."

Thad Litkenhus Caterpillar Resource Industries Vice President of Product Management said:

"Working side by side in the Pilbara's demanding environment allows us to validate battery-electric trucks and charging infrastructure in the exact conditions our customers face."

"What matters is how we translate what we're learning into better outcomes, from improved energy efficiency to supporting lower emissions and more reliable performance at site."

"The progress we're seeing is helping accelerate the development of solutions that our customers can implement with confidence."

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Media Contacts

BHP

Georgina Gabelich

M: +61 414 133 589

georgina.gabelich@bhp.com

Rio Tinto

Alyesha Anderson

M: +61 434 868 118

media.enquiries@riotinto.com

Caterpillar

Tiffany Heikkila

tiffany.heikkila@cat.com