The Information

Mar 2, 2026

The Electric

By Steve LeVine

The Electric: This Startup Says Winning in Critical Minerals Means Learning From the Chinese

By: Steve LeVine

Firebird Metals Western Australia's Oakover deposit. Photo: Courtesy Firebird.

Welcome back to The Electric!

U.S. and European companies have struggled for years to catch up with Chinese battery, electric vehicle and materials rivals. **This week, we speak** with the CEO of an Australian metals company who argues that he will win because all his products were developed by experts in China.

Firebird Metals plans to mine Western Australia's Oakover deposit. Photo: Courtesy Firebird.

Ford and General Motors are banking on a new manganese-based battery to leapfrog China in the EV battery race. The catch is that they won't break China's stranglehold on the global supply of the material that goes into the battery—high-purity manganese.

But Ron Mitchell, CEO of manganese developer Firebird Metals, says he has an answer to that problem. He's taking know-how developed in China to Australia, where he's building a manganese-processing facility to process metal from a nearby mine.

Firebird's move reflects a small but growing recognition in the U.S. and Europe: If the West wants its own battery supply chain, it will have to go to China for much of the best technology and manufacturing skill—or wait years to develop it alone.

In the U.S., for instance, Ford is using battery technology developed by China's gargantuan Contemporary Amperex Technology Ltd. in two new U.S. plants to make both electric vehicle and stationary storage batteries.

Tesla relies on Chinese-made batteries for its Powerpack and Megapack home and grid-scale power systems.

Firebird's plan to process manganese in Australia reflects an understanding that the West's dependence on China for metals critical to its defense and technology industries can't be reduced rapidly.

"What we've done that's different to other companies is we've had a toe in China," Mitchell told me. "We're an Australian company, a public company, but we've developed the tech with Chinese expertise."

Firebird went public in 2021 with plans to mine manganese in the Western Australia battery belt, which has numerous massive lithium mines. But two years ago, the company pivoted to becoming a more vertically integrated operation. It will mine the metal, refine it into battery-grade manganese and use it to manufacture cathodes, the primary component of a battery.

The move coincided with a new industry focus on manganese as an abundant, relatively inexpensive metal that could both raise the quality of cheap batteries and make higher-performing batteries cheaper.

In the U.S. and China, multiple companies said they planned to release an upgraded manganese-infused version of the cheap lithium-iron-phosphate batteries, or LFP, used in most Chinese EVs. This new battery, called lithium-

manganese-iron-phosphate, or LMFP, would deliver more driving range than LFP while costing less than the nickel-based batteries that power high-end EVs.

Then, last year, Ford and General Motors separately announced plans to release EVs powered by another type of manganese-infused battery: lithium-manganese-rich, which would best the driving range of LMFP while falling just short of a nickel-based battery's range. GM said it would release cars in 2028 with LMR batteries. Ford said it would do so by the end of the decade, without specifying a year. These are the batteries both companies hope will enable them to leapfrog China.

In a departure from the strategy of mining rivals that plan to set up metals refining operations in the West, Firebird said it would ship its manganese to China and conduct its research, processing and component manufacturing there.

Firebird executives went on the hunt in Hunan province, the home of much battery and metals talent, where the company's executive director, Wei Li, had family in the manganese business, Mitchell said. The company hired a slew of local manganese specialists and graduates of elite Central South University and launched a subsidiary in the city of Jinshi.

Mitchell said the Jinshi subsidiary produced a new type of kiln for processing manganese that uses only a third as much energy as traditional models. The subsidiary also obtained Chinese patents for their own versions of LMFP and LMR.

Firebird's Jinshi lab. Photo: Courtesy Firebird.

Andrew Leyland, managing director of SC Insights, a battery consultancy, said Western battery and EV companies have been paying a premium for manganese

produced outside China due to the tense geopolitics. Still, most non-Chinese manganese producers have struggled to make money, said Cormac Olaoire, a battery metals consultant.

But Mitchell said the processes developed in Jinshi have significantly lowered its production and component costs, giving it a pricing advantage.

Last week, Firebird obtained Chinese approval to commercialize the Jinshi products outside China through 2041. The company will start with a demonstration plant in Western Australia that will use manganese from its local mine, Mitchell said.

“We’re not sitting in an Australian office trying to develop this technology independent of China,” he said. “I think that is very tough to do that. I’ve been to China more than 40 times. Our team there has more than 50 years of manganese processing experience between them.”
