

Wabtec and Roy Hill Unveil the First FLXdrive Battery Locomotive

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World's first 100% battery-powered, heavy-haul freight locomotive for mainline service

ERIE, Pa.--(BUSINESS WIRE)--Oct. 31, 2023-- Wabtec and its launch customer, Roy Hill, a leading iron ore miner majority owned by Australia's most successful private company, Hancock Prospecting, celebrated the debut of the FLXdrive battery locomotive, the world's first 100% battery-powered, heavy-haul locomotive for mainline service. The ceremony unveiled the unique, striking pink-colored locomotive at Wabtec's design and development center in Pennsylvania in front of employees, customer executives, and government and community officials.

This press release features multimedia. View the full release here: https://www.businesswire.com/news/home/20231031768453/en/



Wabtec unveiled the FLXdrive, the world's first 100% battery-powered, heavy-haul locomotive donning Roy Hill's iconic pink livery. (Photo: Business Wire)

"This FLXdrive locomotive represents a major step in the journey to a low-to-zero-emission future in the rail industry," said Rafael Santana, President & CEO of Wabtec. "The FLXdrive is driven from within by our battery technology and the innovative spirit of our employees. Roy Hill is an ideal customer to partner with given their leadership and excellent operational record."

Roy Hill's FLXdrive battery-electric locomotive will feature an energy capacity of 7 megawatt hours (MWh). Based on the route and company's rail operations, the FLXdrive is anticipated to provide a double-digit percentage reduction in fuel costs and emissions per train. Once Wabtec completes the final battery installations and track testing, the locomotive will begin its 17,000-kilometer (10,500-mile) journey in 2024 for delivery to its new home in the Pilbara region of Western Australia, one of the world's premier mining precincts.

"The foresight of our Executive Chairman, Mrs. Gina Rinehart AO, has been instrumental in establishing an environment

in which we can successfully leverage the ingenuity of our people alongside key partners like Wabtec to transform our rail and mining operations through next-generation technologies," said Gerhard Veldsman, Chief Executive Officer, Hancock Prospecting Group Operations.

"The FLXdrive locomotive represents not only a first for the Pilbara, but a first for the mining industry. The technological smarts that have gone into the development of the loco makes it well suited for our rail network. By using regenerative braking, it will charge its battery on the 344 kilometer (214 mile) downhill run from our mine to port facility and use that stored energy to return to the mine, starting the cycle all over again. This will not only enable us to realise energy efficiencies but also lower operating costs."

Today, Roy Hill uses four Wabtec ES44ACi "Evolution Series" diesel-electric locomotives in a consist to pull trains that are typically 2,700 meters (1.6 miles) in length carrying more than 33,000 tonnes of iron ore. The addition of the FLXdrive will form a hybrid locomotive consist with Wabtec diesel-electric locomotives, and recharge during the trip through regenerative braking. The FLXdrive manages the overall train energy flow and distribution through its state-of-the-art energy management software. It is also designed with a unique battery thermal management system using liquid cooling to withstand the Pilbara heat, where temperatures can reach 55°C (130°F).

Roy Hill's iconic pink livery symbolizes the company's commitment to assisting research and those suffering from breast cancer. To commemorate the FLXdrive's premiere, Roy Hill, and Breast Cancer Awareness Month, Wabtec donated \$50,000 to Linked By Pink, a non-profit organization consisting of Erie area survivors diagnosed with breast cancer before the age of 45.

About Roy Hill

Roy Hill is a world-class iron ore operation in Western Australia's mineral rich Pilbara region. Roy Hill is chaired by prominent Australian business leader and current West Australian of the Year, Mrs. Gina Rinehart AO. Roy Hill incorporates an integrated mine, rail, and port facilities, shipping more than 63 million tonnes per annum. Roy Hill's first shipment departed Port Hedland in December 2015 to South Korea and in the years since has established itself as a trusted and reliable producer of iron ore, delivering to steel making markets including Japan, South Korea, India, Malaysia,

China, and Vietnam. Visit Roy Hill's website at: www.royhill.com.au.

About Wabtec

Wabtec Corporation (NYSE: WAB) is focused on creating transportation solutions that move and improve the world. The company is a leading global provider of equipment, systems, digital solutions and value-added services for the freight and transit rail industries, as well as the mining, marine and industrial markets. Wabtec has been a leader in the rail industry for over 150 years and has a vision to achieve a zero-emission rail system in the U.S. and worldwide. Visit Wabtec's website at: www.wabteccorp.com.

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