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Huaneng Group and Huawei Launch World's Largest Autonomous Electric Mining Truck Fleet

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Chinese state-backed energy giant Huaneng Group today announced the launch of the world's largest fleet of unmanned electric mining trucks in Inner Mongolia. The deployment features 100 Huaneng Ruichi branded vehicles equipped with advanced autonomous driving systems developed by Huawei Technologies, marking a significant step in China's rapid adoption of driverless technology within traditional industries.

Li Shuxue, chairman of Huaneng Mengdong, a subsidiary of Huaneng Group, hailed the launch as the "world's largest single deployment of driverless electric mining trucks," underscoring China's progress in the "transforming and digitising traditional industries."

The Huaneng Ruichi trucks integrate cutting-edge technologies, including 5G-Advanced (5G-A) communications, artificial intelligence (AI), cloud computing platforms, smart battery swapping capabilities, and high-accuracy mapping systems, according to Mr. Li. Key technology providers for the initiative include Huaneng Group, Xuzhou Construction Machinery Group, and the Beijing University of Science and Technology.

This project aligns with a broader national strategy by Chinese authorities and various enterprises to incorporate AI and advanced communication technologies into established sectors, ranging from port management to coal mining operations. Huawei is recognized as a major provider of AI-powered solutions for the upgrade of traditional industries across China.

Deployed at the Yimin coal mine in Hulunbuir, a major city in northeastern Inner Mongolia, the autonomous trucks are engineered to perform loading and unloading of mining materials and operate effectively in challenging weather conditions. Mr. Li anticipates that the deployment of these vehicles will enhance “overall transport efficiency” by 20 per cent compared to traditional manned trucks.

Zhang Pingan, CEO of Huawei Cloud, emphasized the critical role of 5G-A technology in bolstering the capabilities of the automated mining truck fleet. He noted that 5G-A offers substantial improvements in speed and connectivity over standard 5G, with potential downlink speeds reaching 10 gigabits per second and uplink speeds up to 1Gbps.

Jack Chen, vice-president of marketing and solutions for oil, gas and mining at Huawei, stated that the Ruichi trucks embody the company’s vision for smarter mining operations and highlighted the technology’s potential for application in international markets, including Africa and Latin America.

This initial deployment of 100 autonomous trucks represents the first phase of a larger plan to deploy a total of 300 such vehicles at the Yimin coal mine within the next three years.

Industry data from the China National Coal Association indicates a rapid increase in the adoption of automated mining trucks across the country, with estimates suggesting over 5,000 operational units by the end of the current year and a projected doubling to 10,000 by 2026. The trade group also noted that the increasing integration of new technologies has contributed to an 8 per cent reduction in operational costs for coal mines in China as of last year, while the country remains the world’s largest coal producer with approximately 4,300 operational mines.