

BPI Launch Marks a New Era in Battery Driven Mining Technology in SA

Pretoria, 20 June 2018: *Battery Power Industries (BPI), an innovative battery driven mining vehicle solution provider has officially launched. BPI targets zero emission underground mining equipment with their advanced battery energy systems technology offering.*

BPI is a proudly South African OEM specialising in the development of battery energy systems, electrical traction systems and high speed charging systems for underground mining equipment. All of BPI's products are designed and manufactured in South Africa, by local engineers for the South African mining industry. BPI seamlessly combines extensive expertise in electronic, electrical and mechanical systems engineering. With experience in meeting mining industry related challenges through the implementation of the latest battery technology, BPI provides solutions to enhance the efficiency, sustainability, and safety of mining operations.

BPI has its origins within local consulting engineering firm, Thuthukani Engineering Solutions. Over the past five years, Electrical Systems Engineer, Calvin Coetzee, has been working with key partners to develop advanced electric drive systems for mining vehicles as well as battery and charging systems. This has led to the commercial roll-out of electric hauler systems, electric personnel carriers, and electric low profile load haul and dump machines.

The advent of these patented electric vehicle and battery systems designs developed by the team at Thuthukani captured the attention of the IDC who have provided BPI with a working capital facility to fund further commercialisation, R&D, and potential future manufacturing capabilities. Alongside their existing commercial systems, BPI is still in the process of securing additional R&D funding.

BPI's offering will consist of integration and supply of electric vehicle traction systems, battery powered mining vehicles, zero emissions technologies, EV-Lithium battery systems, and charging systems. BPI's capabilities include the design, manufacturing and integration of all necessary components for a full electrical traction system and related charging infrastructure. This includes the careful consideration and integration of all auxiliary systems and battery storage units, including; traction, cooling, electrical management, and distribution systems.

"Our designs are able to outperform traditional diesel-fueled vehicles on the market through their ability to eliminate diesel particulate emissions and achieve considerable energy cost savings and lower overall machine costs," says Coetzee. "We aim to remove all emissions and harmful equipment from use in mining operations as part of our innovation-led approach to sustainable mining. This approach applies innovative thinking and cutting edge technologies to address mining's major challenges."

According to Coetzee, BPI's systems will offer a number of benefits to mining operations. "Compared to traditional machines, the maintenance requirements on an electrical system is half that of traditional diesel powered machines. In addition to this, our type of systems allow for existing underground infrastructure to be used in order to charge and service this

form of equipment. Our systems are also able to address some of the mining industry's biggest challenges – productivity, costs, fatigue and safety,” Coetzee explains.

Ultra-safe is a concept that dictates BPI's approach to the design and integration of systems. This concept applies to noise reduction, zero-emissions, lower heat and simpler maintenance in the technology application. An additional benefit of BPI's technology is that many of the components and battery types used are completely recyclable.

This methodology is in line with BPI's mission to become a forward thinking firm operated and managed by a new generation of innovative engineers. “A sustainable approach to every product developed will become entrenched in BPI's culture and this, along with safety and the creation of employment opportunities, will be our driving force. We are committed to creating opportunities for young, forward-thinking engineers in South Africa and will be putting considerable effort into future training and skills development programs,” Coetzee concludes.

For more information, visit www.batterypowered.co.za or follow Battery Powered Industries on LinkedIn.

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