Press Release

Polish engineers design a new generation of batteries for the global electric bus and special vehicle industry

Gliwice, 31 March 2026 – **Engineers at the Polish branch of battery manufacturer BMZ have developed a new generation battery system designed for the global market of electric buses and special-purpose vehicles. The key distinguishing feature of the Versora battery is its scalable architecture, enabling vehicle manufacturers to configure the system like building blocks – in terms of energy, power, operating voltage and dimensions. The new battery type was developed at BMZ Poland's EV (electric vehicle) competence centre, where it will also be manufactured.**

According to BMZ Poland engineers, in addition to its scalable architecture, one of Versora's unique design features is the ability to use two different cell chemistries – NMC and LFP – while maintaining identical dimensions and nearly identical weight. This allows the battery system to be tailored to vehicle requirements without redesigning the system architecture. As a result, both a premium variant – offering high energy density and extended range or operating time – and a cost-efficient variant meeting basic market needs can be developed. Looking ahead, this also enables the use of cells produced in Europe and worldwide without modifying the system design.

Thanks to its modularity and compactness, the battery can also be used in retrofit projects – vehicles upgraded by replacing combustion engines with electric drives. Its low profile allows installation both in the floor and on the roof of a vehicle. The system design also enables batteries to be stacked, further increasing integration flexibility.

The growing presence of electric vehicles in road traffic significantly reduces harmful emissions, particularly in urban areas. Combined with energy sourced from renewables, this contributes to reducing dependence on fossil fuels or diversifying their use. A similar project – based on a different BMZ battery type – is being carried out by the company in the United States, electrifying trolleybus fleets from 2025 onwards, starting in California, with plans to expand to other states.

One platform – multiple applications

The Versora battery has been designed for vehicles requiring reliability, safety and customisable battery system configurations. In the future, the system will be used in:

- electric buses (urban, airport, school and hydrogen-powered buses with electric drive) and trolleybuses,
- municipal vehicles such as refuse trucks and street sweepers,
- agricultural and construction machinery (e.g. excavators),
- special-purpose on-road and off-road vehicles such as logistics vehicles and trucks with specialised bodies,
- retrofit projects involving the replacement of combustion engines with electric drives,
- potentially also inland waterway vessels.

The platform enables the use of large-scale production technology even in low-volume markets. Thanks to scalable voltage and energy, the system can support both low- and high-voltage applications (400V and 800V architectures), opening access to previously hard-to-reach segments. Another innovation is a new cell thermal management system that improves both energy density and safety. In the new architecture, the heat exchanger is integrated into the housing, while all connections and fluid distribution are located outside the battery compartment, significantly enhancing safety compared to conventional solutions.

As BMZ Poland engineers emphasise, the new platform is the result of over 12 years of BMZ's experience in eMobility, dating back to the production of its first electric vehicle battery in 2014. Versora was developed at the EV competence centre in Gliwice and designed to combine configuration flexibility with the requirements of commercial and special-purpose vehicle markets.

"Versora is a platform designed in Poland but created from the outset with global bus and special vehicle manufacturers in mind. Its modularity and flexible configuration enable our partners to respond more quickly to changing market needs and regulations. It is the result of many years of work by our specialists and, in our view, represents a new standard in the electric vehicle battery industry. We are pleased that it will soon be seen on the roads," said Robert Kowalczyk, CEO of BMZ Poland.

The new system is another off-the-shelf solution in BMZ's portfolio and can replace earlier models and competing solutions, offering greater scalability and platform standardisation.

Versora system technical data

Versora is a modular battery system available in two design variants – Compact and Versus – enabling flexible energy and voltage configuration as well as adaptable battery placement within a vehicle (batteries as part of a string can be located in different areas).

System topology:

- from 32S to 192S (series cell configuration) at system level, i.e. from 100V to 800V,
- possibility of parallel connection of battery strings,
- support for both distributed and standalone topologies.

Energy range (depending on configuration):

- LFP: from 14 kWh (32S) to 86 kWh (192S) per single string,
- NMC: from 19 kWh (32S) to 118 kWh (192S) per single string.

Compliance with latest regulations and standards, including:

- UN/ECE R10,
- UN/ECE R100,
- UN 38.3,
- Regulation (EU) 2023/1542 – including Battery Passport requirements,
- Regulation (EU) 2017/2400 – energy consumption and CO_2 emissions modelling (VECTO) for heavy-duty vehicles,
- ISO 26262 – functional safety of road vehicles,
- support for compliance with UN/ECE R155 and UN/ECE R156 based on cybersecurity processes aligned with ISO/SAE 21434,
- compliance with ES-TRIN requirements for inland waterway vessels.

About SKion

SKion is an investment company founded by entrepreneur Dr h.c. Susanne Klatten. It invests in companies with sustainably profitable business models. Alongside economic success, sustainability and corporate social responsibility are of key importance. Susanne Klatten's goal is to create a positive impact on the economy, society and the environment.

SKion aims to strengthen European companies as engines of innovation, acting as a strategic partner grounded in family business values and providing access to industrial networks and capital. The fund focuses on growth financing and succession solutions, with a particular interest in investments carried out jointly with entrepreneurial families and like-minded investors.

About the BMZ Group

BMZ Battery Solutions, headquartered in Karlstein am Main, is a leading international manufacturer of high-performance battery systems and a long-term technology partner in

the electrification and decarbonisation of key industries. The group was founded in 1994 and has over 30 years of experience in developing and industrialising advanced battery systems. Since 2025, BMZ Group has been part of SKion, an investment company founded by Susanne Klatten.

Its solutions are used worldwide in industry, eMobility, stationary energy storage and medical technology. BMZ employs around 1,450 highly qualified staff and operates production facilities in Germany, Poland, China, North Macedonia and the USA, as well as sales and service offices in the United Kingdom, Japan, Brazil and other countries.

The company focuses on developing integrated battery systems across the entire value chain – from concept and prototyping, through intelligent control systems and interface technologies, scalable mass production and global service, to recycling and second-life battery concepts. As a “green energy systems provider”, BMZ combines advanced lithium-ion technologies with alternative cell chemistries to continuously improve performance, safety and sustainability while shaping future market needs.

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