

10 January 2025

**Gelion plc**  
("Gelion" or the "Company" or the "Group")

### **Posting of Annual Report and Notice of GM**

Gelion (AIM: GELN) the global energy storage innovator, has today posted its Annual Report & Accounts for the year ended 30 June 2024 to shareholders.

The General Meeting, at which the receipt of the report and accounts and the reappointment of the Company's auditors, BDO LLP, will be put to shareholders, will be held at 9am (GMT) on Monday, 3 February 2025, at the offices of Cavendish at One Bartholomew Close, London EC1A 7BL.

Copies of the Annual Report, Notice of General Meeting and other documents can be viewed and downloaded from the Company's website: <https://gelion.com/investors/financial-reports-documents-notices/>.

Shareholders who wish to attend the General Meeting remotely should register for the event in advance by contacting [gelion@almastrategic.com](mailto:gelion@almastrategic.com).

### **CONTACTS**

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### **About Gelion**

Gelion ("gel: ion") is a global energy storage innovator, supporting the transition to a more sustainable economy by commercialising two globally important next generation technologies: Lithium-Sulfur (LiS) and Zinc-based (Zn) hybrid cells to electrify mobile and stationary applications. Gelion plc (the Group) is listed on the London Stock Exchange's Alternative Investment Market and wholly owns Australia based Gelion Technologies Pty Ltd and UK based OXLiD Ltd. Gelion is designing and delivering innovative battery technologies and integrated systems solutions to enable that transition and return value for its customers and investors.

### **Lithium Sulfur**

Gelion's effort is directed at the potential for the Li-S chemistry to deliver double the gravimetric energy density of standard Lithium-ion chemistries whilst concurrently reducing cost and increasing safety, targeting the EV and e-aviation market, helping to make global transport, energy consumption and storage more sustainable.

Gelion is developing a GEN 3 Lithium Sulfur cell product for its high energy density sulfur cathode at its expanded R&D facilities in Australia and UK, enabling it to integrate with a variety of anodes ranging from graphite to silicon to lithium metal, depending on the targeted application.

Gelion's GEN 3 cell is unlocking the potential of sulfur batteries for a wide range of global mobile applications including electrical vertical-take-off-and-landing (eVTOL), drone markets, electric vehicles (EVs) and stationary energy storage (ESS).

### **Advantages of Gelion's GEN 3 Lithium Sulfur**

- **High energy density** - Energy density > 400 Wh/kg, when using a 10+ Ah pouch cell.
- **Semi-solid-state as a route to increased longevity/cycle life:** GEN 3 employs a semi-solid-state mechanism, maintaining the sulfur-based cathode materials in the cathode, preventing their diffusion into the electrolyte and diminishing associated battery degradation caused by reactive polysulfides. This approach mitigates the major degradation factor associated with conventional Li-S technology.
- **Increased sulfur utilisation:** GEN 3 demonstrates the full theoretical capacity of sulfur, i.e. a much higher sulfur utilisation than found in conventional Li-S approaches.
- **Simplified supply chain:** The innovative cathode is produced by mixing commercially available materials with abundant sulfur using a low-energy, room-temperature process, with potential to eliminate the need for pre-fabrication of the sulfur composite (sulfur composite is related to cathode active material in conventional lithium-ion batteries), streamlining the associated supply chain and production process and enabling localised manufacturing.
- **Environmental and economic benefits:** The water-based, standard-atmosphere cathode production process eliminates the need for toxic solvents, leading to significant cost savings and enhanced manufacturability.

## Glossary

1MPa	This level of pressure replicates real-world pressure conditions inside batteries and is crucial for ensuring the durability, efficiency, and performance of the separator in practical applications.
Ah	Ampere hours. A measure of capacity stored in the cell. The larger the number the higher the capacity.
Energy density (Wh/kg)	The ratio of energy stored per unit weight i.e. Watt-hours per kilogram. The higher the number the lighter the battery.
Pouch cell	An industry standard format of a battery which comprises a flat pouch-shaped design with a multi-layered laminate structure.
Solid-to-solid conversion	A low or polysulfide-free conversion of sulfur within the cathode. Polysulfides are a dissolved form of sulfur that is corrosive and reduces cycle life in traditional lithium-sulfur batteries. Solid-to-solid conversion helps mitigate the formation of these polysulfides.
Semi-solid state as a route to increased longevity/cycle life:	Gelion's GEN 3 technology can employ a semi-solid-state mechanism, maintaining the sulfur-based cathode materials in the cathode, preventing their diffusion into the electrolyte and diminishing associated battery degradation caused by reactive polysulfides. This approach mitigates the major degradation factor associated with conventional Li-S technology.
Solid state separator	A solid-state separator is a solid material that separates the anode and cathode in a battery, enabling ion transfer while preventing short circuits enhancing battery safety, supports higher energy densities, and allows stable use of a lithium metal anode, increasing capacity and lifespan.
Cycle life	The number of full charge and discharge cycles a battery can complete before its capacity falls below a specified level, typically 80% of the original capacity. Higher cycle life indicates longer-lasting performance.

## Zinc

Gelion is adapting its zinc technology to comprise an alternate cathode technology, a zinc hybrid cell to develop complementary next-generation batteries for the lead-acid eco-system. Early testing indicates that this solution has the potential to maintain good energy density levels with enhanced cost and safety aspects. Once fully developed, Gelion intends for our zinc technology to provide a durable and sustainable market extension within the ecosystem that supports lead-acid batteries.

## Recycling

Gelion is pioneering an innovative battery recycling technology designed to enhance and supplement current recycling methods. Our technology aims to significantly reduce the initial costs of recycling plants, minimize waste, and lower carbon emissions, while improving the purity of metal products and enabling efficient lithium extraction. This advancement will allow for a broader range of scrap materials to be recycled. Currently in the feasibility stage, Gelion is committed to advancing our technology to a pilot-scale demonstration, paving the way for commercialisation through material production and IP licensing.

## Integration Solutions

Gelion leverages its significant integration and BMS capability to deliver bespoke BESS for Australian customers. These BESS are currently based on lithium-ion technology and will also include Gelion's next-generation batteries as these become available. Gelion will deploy BESS with our proprietary cloud-based battery monitoring system, which will provide real-time diagnostics and alerts to maximise performance and return on investment for our customers.

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