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(Incorporated in the Republic of Singapore)

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The contact person for the Sponsor is Mr. Joseph Au at 36 Robinson Road, #10-06 City House, Singapore 068877, Email: sponsor@rhtgoc.com.

## For Immediate Release

### PRESS RELEASE

#### **H2G Green Limited's GEIH and A\*STAR Sign Agreement to Commercialise Biomass-to-Hard Carbon Technology for Sodium-Ion Batteries**

*As H2G innovates in novel hydrogen production technologies, the biochar byproducts of its process will be refined and commercialised under the agreement.*

**SINGAPORE, 30 July 2025 /PR Newswire/ – [H2G Green Limited \(SGX:5AI\)](#) ("H2G" or the "**Company**", together with its subsidiaries, collectively the "**Group**"), a leader in sustainable energy solutions, and its subsidiary Green Energy Investment Holding Private Limited ("**GEIH**") today announced a licence agreement with Singapore's Agency for Science, Technology and Research ("**A\*STAR**").**

GEIH is an innovator in sustainable hydrogen with proprietary technologies that repurposes and transforms waste biomass into green hydrogen, as well as biochar and other high-value, sustainable materials. GEIH will commercialise a proprietary treatment process by A\*STAR Institute of Materials Research and Engineering (A\*STAR IMRE) to purify biochar, a by-product, into high-value hard carbon material for market use. Hard carbon materials are primarily used as anodes for batteries such as sodium-ion and lithium-ion batteries, due to their unique properties. They are also found in applications for water and air purifications as well as conductive additive in paints and coatings.

Following execution of the licence agreement, GEIH and A\*STAR will begin the next phase of scaling up to accelerate the commercialisation pathway of the biochar purification process, focusing on producing hard carbon as anodes for use in sodium-ion batteries.

Mr. Sydney Kwan, CEO of GEIH, remarked: “We are deeply grateful to A\*STAR for their ongoing collaboration and support. Our joint efforts are transforming the nation into a hub for sustainable technologies and green energy.”

An earlier exploratory phase found that the hard carbon GEIH produces tends to be superior to existing commercial materials due to a high graphite content, which makes the material favourable for anodes in sodium-ion batteries. These have possible applications for grid-scale energy storage, electric vehicles, and consumer electronics. The abundance of sodium makes sodium-ion batteries a more sustainable alternative to lithium-ion batteries.

GEIH’s technologies make it especially suited to this endeavour. The Company’s proprietary high-temperature thermochemical process turns any type of biomass without silica into hydrogen, biochar, bio-oil (for sustainable aviation fuel), and wood vinegar. The entire process incorporates circularity of materials as a guiding principle, and production of biochar results from incorporating carbon sequestration. The output materials power sectors as diverse as data centres, wafer fabrication, construction, agriculture, food manufacturing, laundry services, and central kitchens.

Mr. Pek Hak Bin, CEO of H2G, added: “Hydrogen is the energy of the future and a core part of Singapore’s low-carbon energy strategy. H2G is expanding possibilities for Singapore and beyond by pioneering a novel hydrogen production process that is cost-effective, less carbon intensive than electrolysis, and repurposes waste into sustainable materials. These power sustainable industries, as our hard carbon anode materials for sodium-ion batteries will empower a broader range of industries to reduce their environmental impact. In this way, H2G creates win-win-win sustainability solutions to multiple problems across industries.”

**\*End of Press Release\***

### **About H2G Green Limited**

H2G focuses on delivering sustainable energy solutions through its two subsidiaries: GasHubUnited Utility Private Limited ("**GasHub**") for LNG and GEIH for hydrogen, biochar, and other high-value, sustainable materials. In Singapore, the Company is working towards solving the energy trilemma — advancing cost competitiveness of sustainable energies, expanding energy security, and transitioning to net zero. Beyond Singapore, the Company is powering Southeast Asia’s transition towards cleaner, sustainable energy solutions. H2G stands out for deep engineering, energy, and sustainability expertise and an unwavering commitment to safety.

For more information about H2G and GEIH, please visit: <https://h2g.green>.

**Media & Investor Contacts:**

Tel: (+65) 6741 3939

Email: [h2g@h2g.green](mailto:h2g@h2g.green)