



Joint News Release

BASF and G-Philos intensify cooperation on stationary storage systems for renewable energy projects

- **Partners offer NAS[®] batteries for long-duration, high-energy stationary storage coupled with a suitable power conversion system for power-to-gas, power grid and microgrid applications**
- **Through their cooperation agreement, both companies strengthen their commitment to the renewable energy market in South Korea**

Ludwigshafen, Germany, and Yongin, South Korea, November 9, 2022 – BASF Stationary Energy Storage GmbH (BSES), a wholly owned subsidiary of BASF SE, and G-Philos, Korea's leader in power-to-gas (P2G) technology, signed a sales and marketing agreement for NAS batteries (sodium-sulfur stationary batteries) for P2G projects, power grid and microgrid applications. The companies will work together to develop and market energy storage systems based on NAS batteries from BASF and power conversion systems (PCS) from G-Philos. G-Philos will also purchase NAS batteries from BSES with a total capacity of 12 MWh.

BASF and G-Philos started to work together in 2020 when an NAS battery system and a PCS developed by G-Philos were deployed in a demonstration P2G project implemented by G-Philos in collaboration with Korea Midland Power (KOMIPO) at Sangmyung Wind Farm, Jeju Island, South Korea. In this project, the NAS battery serves as an energy buffer between wind turbines and electrolyzers to ensure stable hydrogen production from surplus wind power despite the fluctuating nature of wind. NAS batteries were selected for this application due to their enhanced safety, which is required due to their proximity to hydrogen production. Now that the concept has been proven by the successful operation of the system for more than a year, the partners are looking forward to expanding their cooperation further.

Based on their agreements, BASF and G-Philos plan to strengthen their commitment to the market for long-duration energy storage and climate-friendly hydrogen in South Korea and the Asia region. G-Philos also intends to offer preconfigured package solutions consisting of a combination of NAS batteries with its power convertors through its own distribution network. G-Philos can supply PCS products suitable for NAS battery systems ranging from 250 kW up to 1 MW.

Gawoo Park, CEO of G-Philos, says: “With the increasing use of renewable energies, NAS batteries will be one of the most important solutions for storing electricity from renewable sources and, in particular, for CO₂-free hydrogen production. With this agreement, we look forward to making an important contribution to establishing NAS batteries in this application together with BASF and intend to purchase further NAS batteries from BASF in the future.”

“We are pleased to see that the benefits of NAS batteries have been proven once again, now in this challenging application. With G-Philos as a partner, our NAS battery business in South Korea is expected to grow steadily. The new agreement is the starting point to expand the distribution of NAS batteries to other business areas beyond power-to-gas projects,” comments Frank Prechtel, Managing Director of BSES.

About BASF Stationary Energy Storage

BASF Stationary Energy Storage GmbH (BSES) is a wholly owned subsidiary of BASF SE. BSES distributes NAS[®] batteries and co-develops the NAS[®] technology together with its Japanese partner NGK Insulators Ltd.

For more information on NAS[®] batteries, please visit: www.nasbatteries.basf.com

About BASF

At BASF, we create chemistry for a sustainable future. We combine economic success with environmental protection and social responsibility. Around 111,000 employees in the BASF Group contribute to the success of our customers in nearly all sectors and almost every country in the world. Our portfolio comprises six segments: Chemicals, Materials, Industrial Solutions, Surface Technologies, Nutrition & Care and Agricultural Solutions. BASF generated sales of €78.6 billion in 2021. BASF shares are traded on the stock exchange in Frankfurt (BAS) and as American Depositary Receipts (BASFY) in the U.S. Further information at www.basf.com.

About G-Philos

G-Philos has been on the right path to realizing its vision of becoming a global leader in the development and manufacturing of power conversion systems for renewable energy applications since 2009.

After investing considerable efforts into developing and manufacturing highly efficient power conversion systems for over 10 years, G-Philos has established itself as a market leader in power conversion systems (PCS) for fuel cells and power-to-gas (P2G) systems linked to renewable energies for green hydrogen production in Korea. For further information, visit www.g-philos.co.kr

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