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News Release

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BASF contributes CO_2 capture technology to Japan's first demonstration of blue hydrogen and ammonia production from domestically produced natural gas

- **High-pressure regenerative CO_2 capture technology HiPACT® to be used in INPEX's Carbon Capture, Utilization and Storage project**
- **Costs of CO_2 capture and compression expected to be reduced by up to 35%**
- **Supports the production of clean energy with reduced CO_2 emissions**

BASF Japan Ltd., a subsidiary of BASF SE (head office: Ludwigshafen, Germany), has announced that the high-pressure regenerative CO_2 capture technology HiPACT® co-developed by BASF and its engineering partner JGC Corporation will be used by INPEX Corporation, one of Japan's largest exploration and production companies in its Kashiwazaki Clean Hydrogen/Ammonia Project. This is Japan's first demonstration project for the production of blue hydrogen/ammonia from domestically produced natural gas, the consistent implementation of Carbon Capture, Utilization and Storage (CCUS) in domestic depleted gas fields and the use of hydrogen for power generation and ammonia production. The project is funded by the Japanese governmental organization New Energy and Industrial Technology Development Organization (NEDO).

The HiPACT technology will be applied to efficiently capture and recover CO_2 in the process gas from a hydrogen production facility using domestic natural gas as feedstock. Located in the Hirai area of Kashiwazaki City, Niigata Prefecture, Japan, the production facility is constructed by JGC Japan Corporation and is expected to

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start up in 2025. The recovered CO_2 will be injected into the reservoirs of the depleted gas fields leveraging CCUS technologies for enhanced gas recovery (EGR).

By releasing the CO_2 off gas above atmospheric pressure, HiPACT is expected to reduce CO_2 capture and compression costs by up to 35% compared with conventional technologies. This is due to its excellent high-temperature durability and CO_2 absorption performance. As CO_2 can be stored underground in an energy-saving manner, maximum benefits are expected for Carbon Capture and Storage (CCS).

Mami Kawakatsu, Head of Sales, Intermediates Division of BASF Japan, said, “Following the successful use of BASF’s OASE® gas treating technology in another NEDO-funded CCS project in Tomakomai, Japan, we are pleased to provide HiPACT for Japan's first demonstration project to produce blue hydrogen and ammonia from domestic natural gas. The role of our excellent gas-treating technologies is recognized in these milestone projects in Japan’s net zero roadmap. We will continue to contribute to Japan’s 2050 carbon neutrality goal.”

“The implementation of HiPACT is the result of our excellent partnership with JGC Group by combining our capabilities in process technology and plant engineering. We look forward to the use of HiPACT in expanding global CCUS landscape,” added Lawrence Loe, Director, OASE Gas Treating Excellence, Intermediates Asia Pacific, BASF.

BASF’s gas treating technologies have been used in more than 500 reference plants worldwide, and the company has more than 50 years of experience in this field. OASE is a CO_2 capture technology for a wide range of applications, including natural gas, synthesis gas, flue gas and biogas. HiPACT is a specialized solution targeting natural gas and synthesis gas treatment equipped with CCS or with CO_2- Enhanced Oil/Gas Recovery (EOR/EGR). HiPACT and OASE products significantly contribute to both cost savings and sustainability in the value chain.

For more information about BASF and gas purification, visit www.basf.com/oase (in English) and BASF's 50th anniversary of gas treatment technology at https://www.basf.com/jp/ja/products/product-list/intermediates/gas-treatment.html (only available in Japanese).

About High Pressure Acid-gas Capture Technology (HiPACT®)
A high-pressure regenerative CO_2 capture technology jointly developed by BASF and its engineering partner JGC Corporation, which completed demonstration tests at the natural gas plant at the Koshijihara field of INPEX (now INPEX) in 2010 and was commercialised. In 2015, the Serbian oil company Nahtna Indasligija Servizje started commercial operation of a gas refinery with CCS applying HiPACT® technology, which is still in operation today.

About BASF in Japan
BASF has been a committed partner to Japan since 1888. Operating both production sites as well as Research and Development facilities in Japan, BASF contributes to the success of Japanese customers nationwide as well as globally by providing products and solutions to nearly all industries. These include the automotive, construction, pharmaceutical, medical, electronics, electric, packaging, home and personal care, agriculture, and food industries. As of the end of 2022, BASF employed 923 employees in Japan, and recorded sales of about € 2.6 billion to customers in the country. Further information is available on www.basf.com/jp.

About BASF
At BASF, we create chemistry for a sustainable future. We combine economic success with environmental protection and social responsibility. More than 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 €87.3 billion in 2022. BASF shares are traded on the stock exchange in Frankfurt (BAS) and as American Depositary Receipts (BASFY) in the United States. Further information at www.basf.com.