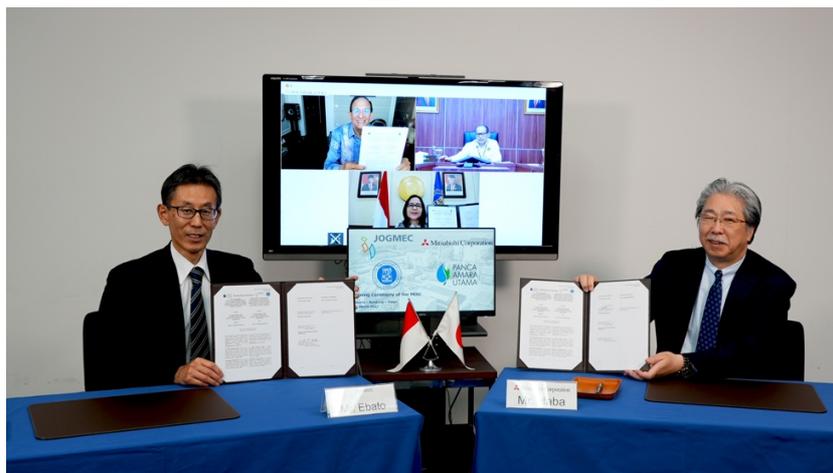


March 19, 2021

Japan Oil, Gas and Metals National Corporation

Mitsubishi Corporation

**Signing of Memorandum of Understanding regarding CCS Joint Study
for Clean Fuel Ammonia Production in Indonesia**



Signing ceremony

Japan Oil, Gas and Metals National Corporation (JOGMEC), Mitsubishi Corporation (MC), Bandung Institute of Technology (ITB), a national university in the Republic of Indonesia, and PT Panca Amara Utama (PAU) have agreed to conduct a joint study on carbon capture and storage (CCS) and carbon dioxide utilization for clean fuel ammonia production in Central Sulawesi, the Republic of Indonesia. The four parties have signed a Memorandum of Understanding (MOU).

Ammonia is being used worldwide as raw material for fertilizers/plastics/chemicals. Expectation for ammonia to become a next generation clean energy source is growing because ammonia does not emit carbon dioxide when burnt; transportation methods have been established with existing infrastructure; and due to its high hydrogen content.

Under the MOU, the four parties will jointly conduct a CCS feasibility study near PAU's ammonia plant in Luwuk, Central Sulawesi, and the Donggi-Senoro LNG plant in the same province which is being led by MC as the largest shareholder. Mitsubishi Gas Chemical Company, Inc., which also indirectly invests in PAU together with Mitsubishi Corporation, has expressed its interests to cooperate in this joint study. Going forward, the companies concerned will formulate the necessary work processes including project composition; data accumulation of candidate storage formations; simulations; analysis and evaluations.

Through this joint study, we will make effort to contribute towards realizing a decarbonized society and securing stable energy supply for Japan by pursuing the feasibility of clean fuel ammonia production from utilization of existing ammonia plant and CCS treatment of carbon dioxide generated during the production phase.



PAU Plant



Map of Sulawesi Province

【Reference】

1. Summary of Institut Teknologi Bandung (ITB)

Location	Jalan Ganesa No.10, Bandung, West Jawa, Indonesia
Business Description	A national university of science and technology that plays an important role in the Center of Excellence CCS/CCUS (CoE), an organization for CCS/CCUS initiatives in Indonesia. The CoE is composed of the Directorate General of Oil and Gas (DG Oil and Gas) of Indonesia's Ministry of Energy and Mineral Resources, the Special Task Force for Upstream Oil and Gas Business Activities (SKK Migas), the state-owned oil development company PT Pertamina, and is responsible for the promotion and technical review of CCS and CCUS (carbon capture, utilization and storage) projects in the country.
Representative	Professor : Ph.D Reini Wirahadikusumah
Establishment	2 nd March 1959
Remarks	ITB plays an important role in the Center of Excellence CCS/CCUS which leads Indonesia's CCS efforts.

2. Summary of PT Panca Amara Utama (PAU)

Location	DBS Bank Tower 18th Floor, Jl. Prof. Dr. Satrio Kav. 3-5 Jakarta 12940, INDONESIA
Business Description	Production and sales of ammonia in Luwuk, Central Sulawesi, Indonesia
Representative	President Director & Chief Executive Officer : Vinod Laroya
Establishment	21 st June 2004
Remarks	Mitsubishi Gas Chemical Company, Inc. and MC together are an indirect shareholder of PAU through an investment purpose company. PAU is responsible for a plant that produces 700,000 tons/year of ammonia, which is made mainly from natural gas supplied by a local development project that MC also invests in.