



siaran pers

11 September 2023

bp, GE Vernova, CARBONCO, PLN Nusantara Power and Jawa 1 team up on carbon capture, utilisation and storage (CCUS) value chain feasibility study

- *Carbon capture, utilisation, and storage (CCUS)/carbon capture and storage (CCS) is a crucial pathway to lowering carbon emissions and achieve Indonesia's net zero ambition.*
- *MoU will leverage bp's global knowledge and expertise in CCUS, GE Vernova's expertise in combined cycle power plant integration with carbon capture plants, CARBONCO's leadership in CCUS technology, and Jawa 1 and PLN Nusantara Power's installed base in Indonesia.*
- *Collaboration to pave the way for Indonesia's energy transition to net zero by 2060 or sooner.*

JAKARTA - BP Berau Ltd (bp), the operator of Tangguh and acts on behalf of Contractors of Tangguh PSC – namely MI Berau B.V., CNOOC Muturi Limited, Nippon Oil Exploration (Berau) Limited, KG Berau Petroleum Ltd., Indonesia Natural Gas Resources Muturi, Inc., KG Wiriagar Petroleum Ltd. – , GE Vernova's Gas Power (NYSE: GE); Korea's CARBONCO, a company specializing in decarbonization solutions established by DL E&C Co., Ltd (KRX: 375500); subsidiaries of Indonesia's state utility PLN, PT. PLN Nusantara Power and PT Jawa Satu Power (Jawa 1), the owner of combined cycle power plant PLTGU Jawa 1 – jointly owned by shareholders Pertamina New and Renewables Energy, Marubeni and Sojitz –; today inked a Memorandum of Understanding (MoU) to jointly carry out a feasibility study to develop a CCUS value chain and joint solutions to decarbonize gas power plants in Indonesia.

When completed, this collaboration would address the entire value chain of CCUS, from the implementation of carbon capture technology in gas-fired power plants to the transportation of CO₂ to import and export terminals, as well as the sequestration of captured CO₂ at the Tangguh field in Teluk Bintuni, Papua Barat, Indonesia. Signed at the 1st International & Indonesia CCS Forum 2023 that takes place on 11-12 September 2023, the joint commitment aligns with efforts to bolster Indonesia's energy transition towards a lower-carbon future rapidly and with scale, especially in the power generation sector.

Kathy Wu, bp regional president Asia Pacific, gas & low carbon energy, commented: "As an energy company who has been a long-time strategic partner for Indonesia and being the most advanced CCUS project in the country, we aim to play an active role in achieving Indonesia's target for Net



Zero. Together with PLN Nusantara, Jawa 1, GE and CARBONCO, we will pave the way for the decarbonisation of Indonesia's power plants with potential CO₂ injection in Tangguh."

The Tangguh CCUS project carried out by bp is the most advanced CCUS project in Indonesia with a development plan that has received approval from the Government of Indonesia in 2021, ongoing front-end engineering design (FEED) work and planned project sanction in the near future. Holding ca 1.8 GtCO₂ in ultimate storage capacity, Tangguh is well-positioned and has a tremendous potential to become the country's first CCS hub for domestic and international emitters.

For the initial phase, at Tangguh, bp plans to inject 30+ million tonnes of CO₂ back into the reservoir to help us recover additional gas production through enhanced gas recovery (EGR). This will be the first large-scale CCUS project with EGR in the world.

As a leading multinational energy company which has been operating for more than five decades in Indonesia, bp brings global knowledge and expertise, technology and financial capability necessary to advance CCUS/CCS initiatives in the country.

For GE Vernova and CARBONCO, the MoU builds on an announcement made in October 2022, to jointly explore a roadmap for the integration of CCUS technology with gas-fired power plants in Asia and the Oceania regions, powered by GE Vernova power technology. Both parties have since identified and developed tangible opportunities based on economic viability and project feasibility. Today's MoU serves as a critical milestone in paving the way to accelerate the adoption of CCUS technologies in Asia.

GE Vernova will build on its recognised experience in advanced technology and controls to integrate combined cycle power plants with CARBONCO's CCUS technology. With proven expertise in gas combined cycle plant engineering, operability, and plant integration with carbon capture plants, GE Vernova will lead integration with the goal of ensuring dispatchability, lower carbon intensity, high flexibility and reliability, and lower capital cost.

CARBONCO will deploy its technological capabilities and experience in CCUS that is backed by more than 20 years of experience executing a variety of global decarbonization projects. In addition, CARBONCO has successfully completed FEED and detailed engineering designs for the carbon capture of 3,000 tonnes of CO₂ per day (TPD) scale. CARBONCO will capitalise on its strengths in standardisation and modularisation towards the joint study to ensure quality standards and de-risk uncertainties.

"GE Vernova continues to play a crucial role in supporting the advancement of the region's energy goals, working alongside global and local players such as bp, CARBONCO, PLN Nusantara and Jawa 1," said Ramesh Singaram, Asia President and CEO of GE Vernova's gas power business. "We are especially focused on developing crucial breakthrough energy technologies such as carbon capture, and are pleased that this collaboration will pave the way for a robust value chain that will help address carbon emissions reduction in the power sector and support climate change commitments in Indonesia."

Dr. Sang Min Lee, CEO of CARBONCO states that, "The top priority of CARBONCO's business agenda is to alleviate climate change in the world. Being a global player, CARBONCO is working tirelessly to transition the region's power industry towards cleaner energy more efficiently and effectively. Working alongside global and local players such as bp, GE Vernova, PLN Nusantara and Jawa 1 is vital to ensure our business is on the right track. We are confident that today's agreement will further accelerate our big movement, and CARBONCO and GE will continue to assess the global market for tangible projects with the right integration model."



###

About bp Indonesia

bp has been a strategic partner for Indonesia for more than 55 years. All bp businesses have a footprint here, with Tangguh LNG as the largest gas producer in the country, Castrol in lubricants, trading, while growing the latest entry in retail and aviation fuel, with total investment of \$15 billion to date. In Papua Barat, bp's presence comprises Tangguh LNG and offshore wells. Tangguh is the highest-producing gas field in Indonesia, contributing ~20% of national gas production, recording a total investment of ~US\$10 billion, and safely delivering >1,500 LNG cargoes. By the time Train 3 is operational, Tangguh's three-train business would contribute about 35% of national production.

About GE Vernova

GE Vernova is a planned purpose-built global energy company comprising of Power, Wind, and Electrification segments and supported by its accelerator businesses of Advanced Research, Consulting Services, and Financial Services. Building on over 130 years of experience tackling the world's challenges, GE Vernova is uniquely positioned to help lead the energy transition by continuing to electrify the world while simultaneously working to decarbonize it. GE Vernova helps customers power economies and deliver electricity that is vital to health, safety, security, and improved quality of life. GE Vernova is headquartered in Cambridge, Massachusetts, U.S. with 70,000 employees across 140+ countries around the world.

About CARBONCO

CARBONCO is a spin-off company from its mother company DL E&C, which is a major affiliate of DL Group. Continuing its 83 years legacy, DL Group has always been one step forward on decarbonization business such as CCUS and Clean Energy. As a technology provider, CARBONCO has specialized in carbon capture with its commercially proven technology over decades. By diversifying its decarbonization business portfolio from FEED/EPC work to consulting services and business development, CARBONCO takes a significant role in every aspects of CCUS and clean hydrogen/ammonia business. Furthermore, as a project developer, CARBONCO puts direct investment to acquire a major/minor stakes of equity in various global projects.

For more information, contact:

Dadan Wijaksana
Communications manager
bp Indonesia
dadan.wijaksana@bp.com