

South Korea's DL E&C marks first entry into Canadian Blue Ammonia fertilizer market

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DL Engineering & Construction (DL E&C), one of South Korea's top five construction companies, has made its debut in the Canadian fertilizer plant project, paving the way for its entry into the North American blue ammonia market. With a projected total value of \$2 billion, the larger EPC phase of the project presents a significant opportunity for DL E&C to solidify its position in the region, marking a strong future for sustainable development initiatives.

On November 20, DL E&C signed a contract with Genesis Fertilizers, a Canadian fertilizer company, at the Embassy of Canada in Seoul. Under the contract, DL E&C will carry out the high-tech Front-End Engineering Design (FEED) phase, while its subsidiary CARBONCO will provide licensing for Carbon Capture, Utilization, and Storage (CCUS) technology. The ammonia production process will be based on technology licensed from thyssenkrupp Uhde of Germany.

The project involves building a fertilizer plant in Belle Plaine, Saskatchewan, that will process 1,500 tons of blue ammonia daily to produce fertilizer. Once complete, the plant will produce approximately 1.05 million tons of fertilizer annually. The total contract value is \$35 million, and the FEED phase is scheduled for completion by 2026. Genesis Fertilizers plans to issue a follow-up Engineering, Procurement, and Construction (EPC) contract once the FEED phase is completed in 14 months.

As mentioned, CARBONCO's CCUS technology will be applied to the facility. Ammonia, a key ingredient in fertilizer, is typically extracted from natural gas, a process that generates significant amounts of carbon dioxide (CO₂). CARBONCO's

amine-based absorbent, which has a high technology maturity and large-scale capture capability, will capture around 800,000 tons of carbon dioxide annually. The proposed facility will eliminate 95% of the carbon emissions generated by the plant. The captured carbon dioxide will be sent via pipeline to an underground storage site approximately 16 km (10 miles) away, where it will be permanently stored. This setup not only produces blue ammonia by removing carbon dioxide but also enables the production of eco-friendly fertilizer.

North American countries, including the U.S. and Canada, are increasingly announcing support for green business initiatives, leading to a surge in new eco-friendly plant project opportunities. In particular, the Canadian government's Bill C-59, announced in June, has made Genesis Fertilizers' fertilizer plant eligible for tax credits, which is seen as a positive development. Investment in the green sector is also growing. According to the Global Sustainable Investment Alliance (GSIA), North America accounted for \$19.5 trillion in green investments in 2020, making up about 55% of global investment totals (\$35.3 trillion).

Previously, DL E&C built two ammonia plants (Units 2 and 3) for Ma'aden in Saudi Arabia, using the same process as the current project. The plants, with a daily production capacity of up to 6,600 tons, are the world's largest ammonia plants. Unit 2 started commercial operations in 2016, and Unit 3 began in 2022.

DL E&C is the only South Korean company currently performing EPC projects in the U.S. It is currently executing the world's largest polyethylene production project in Texas. This involves a 2 million-ton high-density polyethylene (HDPE) plant being built by the joint venture of U.S. petrochemical company Chevron Phillips Chemical and Qatar's state-owned energy company Qatar Energy, scheduled to start commercial operations in 2026.